

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342620015-7

POSTNIKOV, V. F.
N. N. KOROBOV, ZhOKh 9, 1920-5, 1936

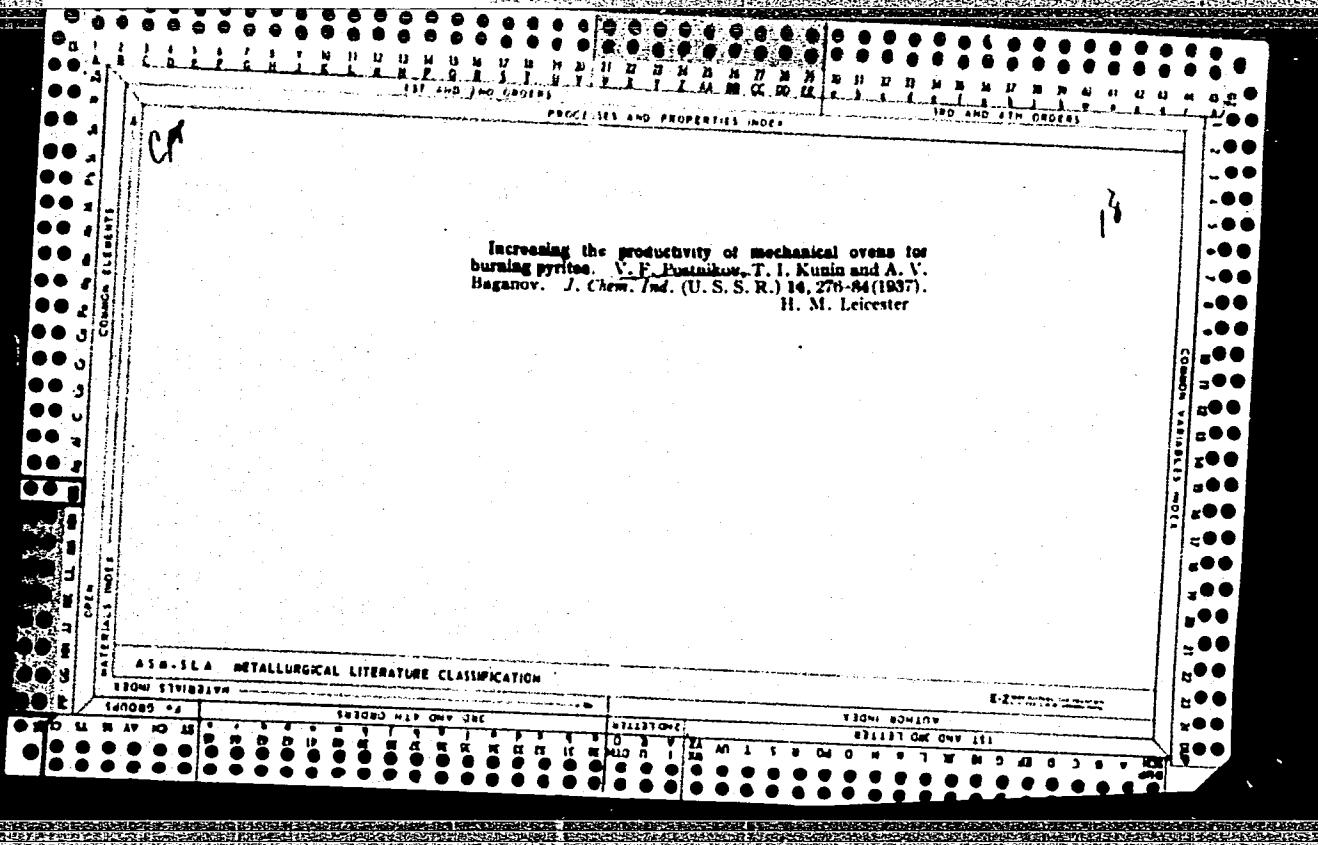
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1ST AND 2ND GROUPS		PROCESSES AND PROPERTIES INDEX	
COPPER ELEMENTS	COMPOUNDS	18	
		Preparation of sodium hexametaphosphate. A. Kh. Bronnikov and V. F. Postnikov. <i>J. Applied Chem. (U. S. S. R.)</i> 11, 1245-1310 (in French, 1310) (1938).— Monosodium phosphate was prep'd. by the evapn. of a stoichiometric mixt. of H_3PO_4 and pure Na_2CO_3 to d. 1.48 and crystn. at 10° (if the mixt. be evapd. to d. 1.3, crystn. should be carried out at 3-4°). The crystals contained 49.7% PO_4 . In the prepn. of the same compnd. from tech. reagents evapn. to dryness is necessary, since the product does not recrystallize. The least corrosive action of the evapn. soln. was observed with Pb and the highest with Fe. The best conditions for prepn. of $(NaPO_4)_6$ were heating $NaH_2PO_4 \cdot 2H_2O$ at 62° for 16-30 min. and rapid cooling of the molten mass by immersion of the container in cold water. The "activity" of $(NaPO_4)_6$ was detd. by titration with 1% soln. of $BaCl_2 \cdot 2H_2O$ at room temp. to appearance of opalescence of soln. and by the amt. of gypsum dissolved in the $(NaPO_4)_6$ soln. The "activity" of $(NaPO_4)_6$ was higher in the products contg. less pyrophosphate. The product contained about 82% of $(NaPO_4)_6$. Fe, cast Fe and steel cannot be used for the construction of app., but fused basalt and fire clay were used and gave satisfactory results. A. A. Podgorny	
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION			
1ST AND 2ND GROUPS		INDEX	
SUBJECTIVE		TOPIC	
SECOND	1ST	SECOND	TOPIC
S	O	U	IRON & STEEL
M	A	V	METALS
N	H	M	NON-METALS
W	E	R	WATER & AIR POLLUTION
L	I	C	LEAD INDUSTRY
D	F	O	DRYING
P	C	M	PHOSPHATE
G	S	N	GLASS
B	T	R	BURNING

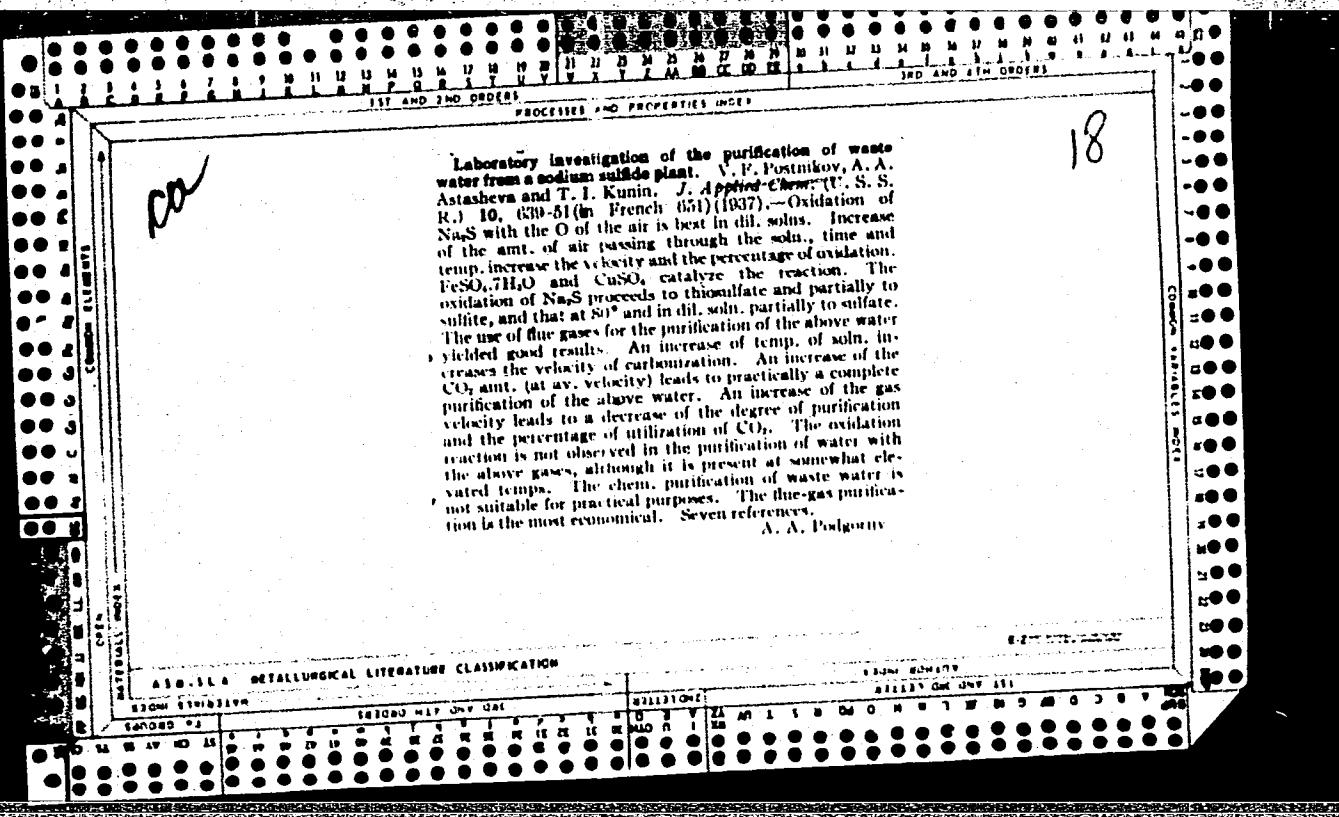
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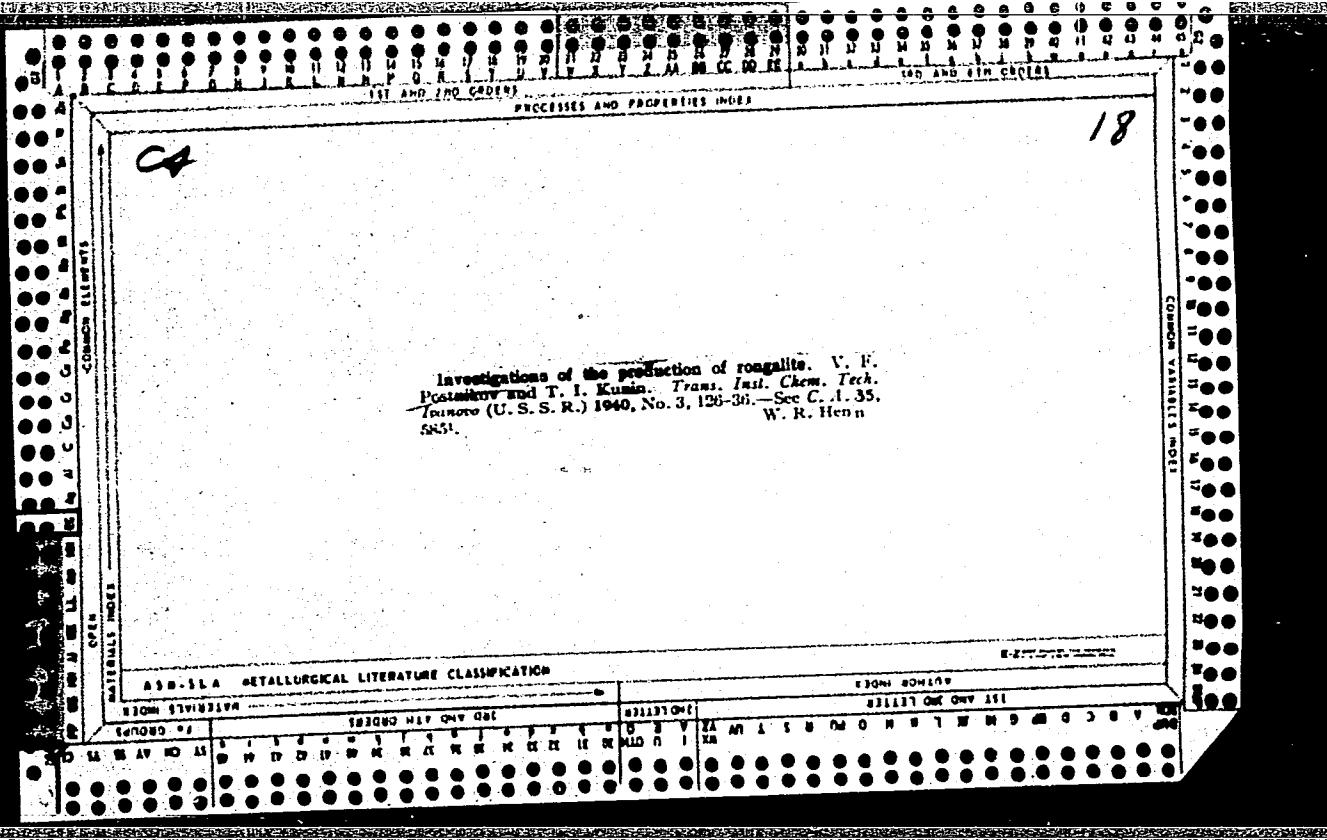
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Fermiger. L. I., Kuz'min and V. F. Postnikov. Russ.
41,800, Feb. 28, 1935. PbN_3 is heated with either H_2SO_4
or H_2PO_4 until it is completely dissolved.

ASA-SEA METALLURGICAL LITERATURE CLASSIFICATION



POSTNIKOV, V.F.

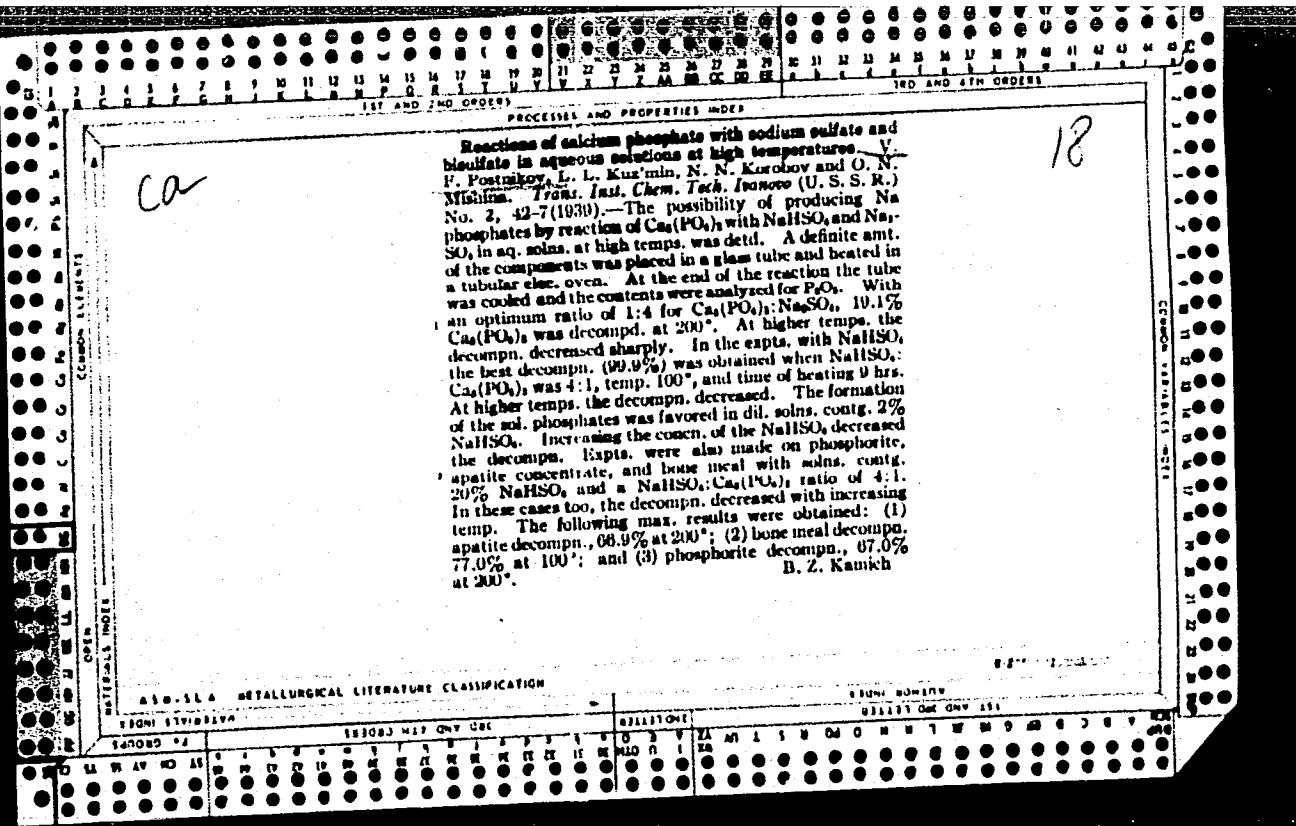
RT-797 /Purification of hydrogen used in ammonia synthesis by removing hydrogen sulfide with activated charcoal/ Ochistka vodoroda dlia sinteza ammiaka ot primesi serovodoroda aktivirovannym uglem.
Zhurnal Prikladnoi Khimii, 6(2): 240-244, 1933.

POSTNIKOV, V. F.

"Sur l'obtention et certaines proprietes des $PbCl_4$, H_2PbCl_6 et $(NH_4)_2PbCl_6$.",

Postnikov, V. F. et Speranskij, A. I., (p. 1328)

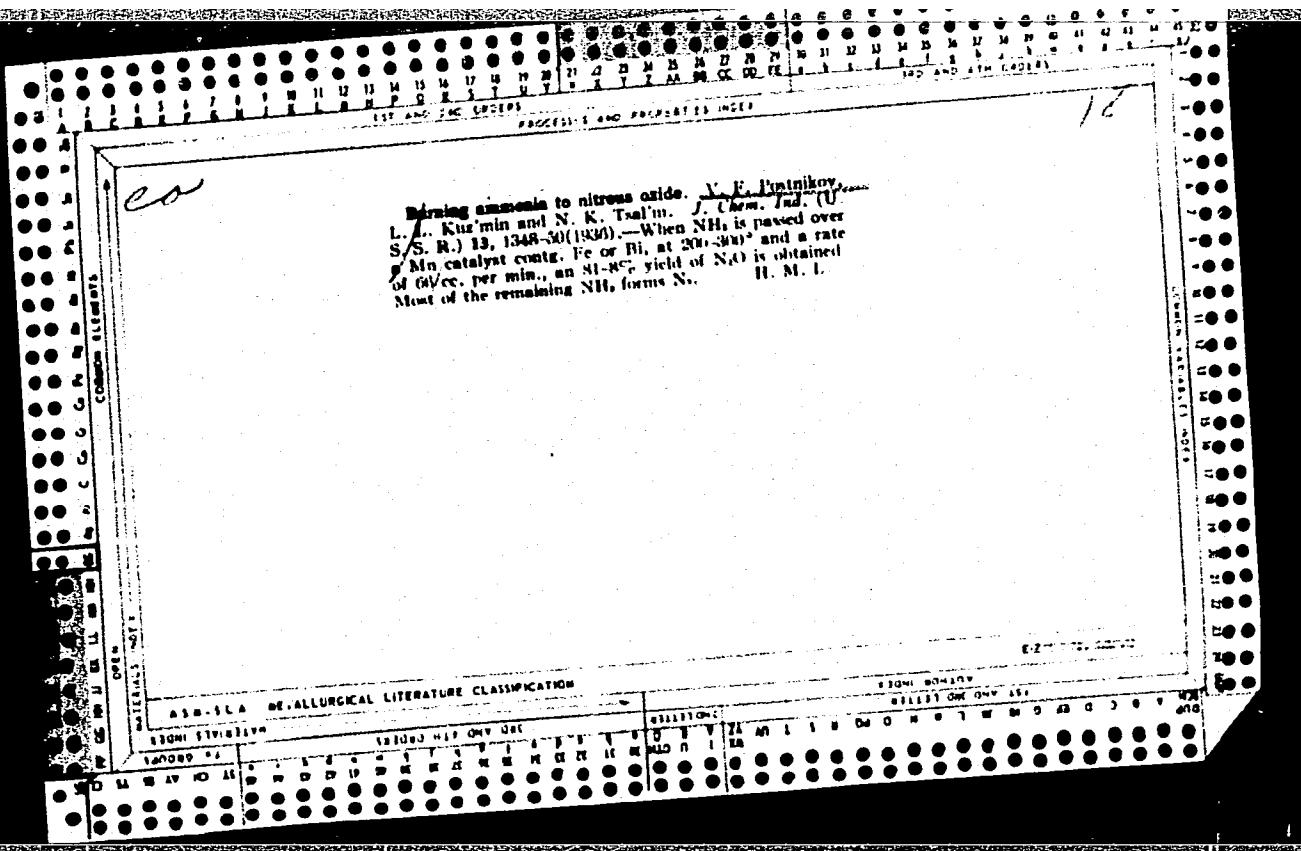
SO: Journal of General Chemistry (Zhurnal Obshchey Khimii) 1940, Volume 10, no. 14.

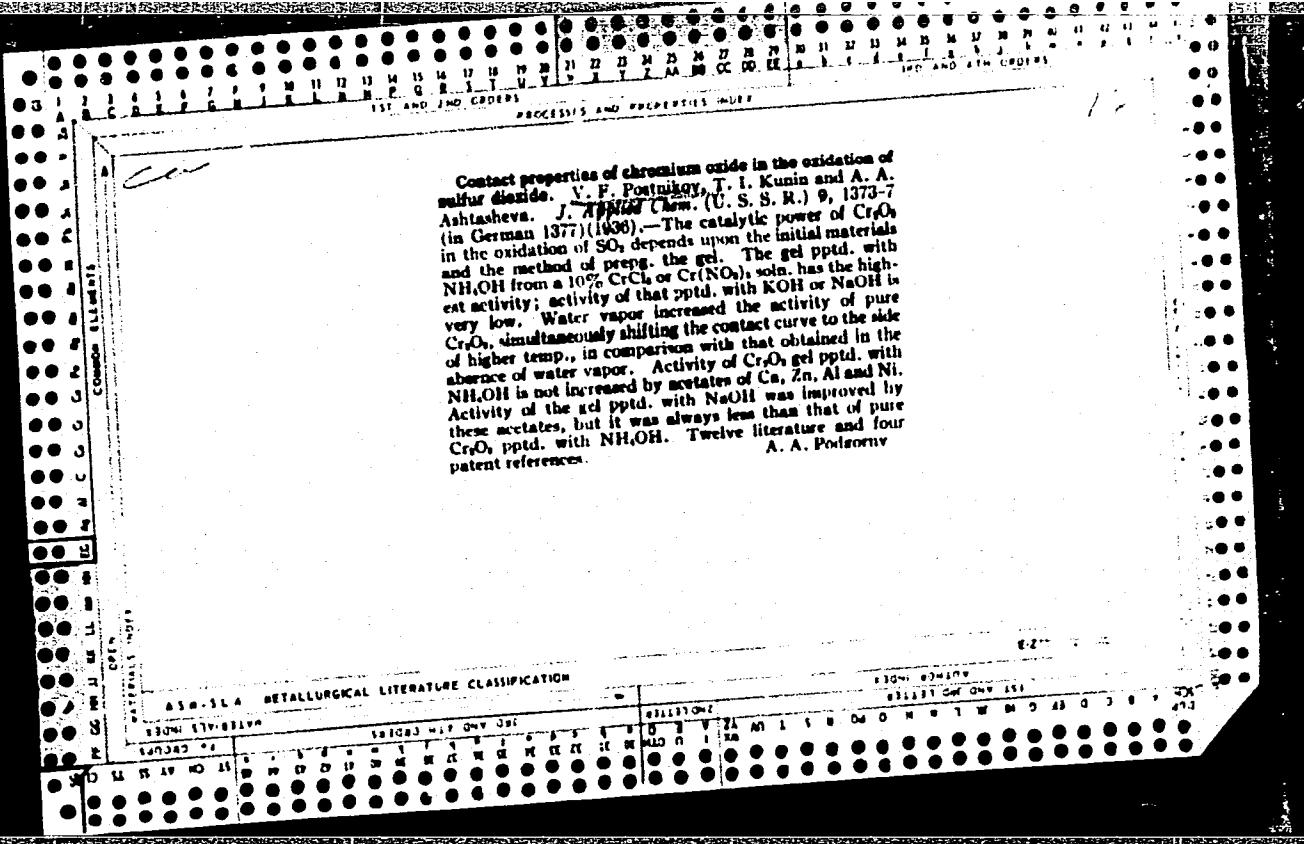


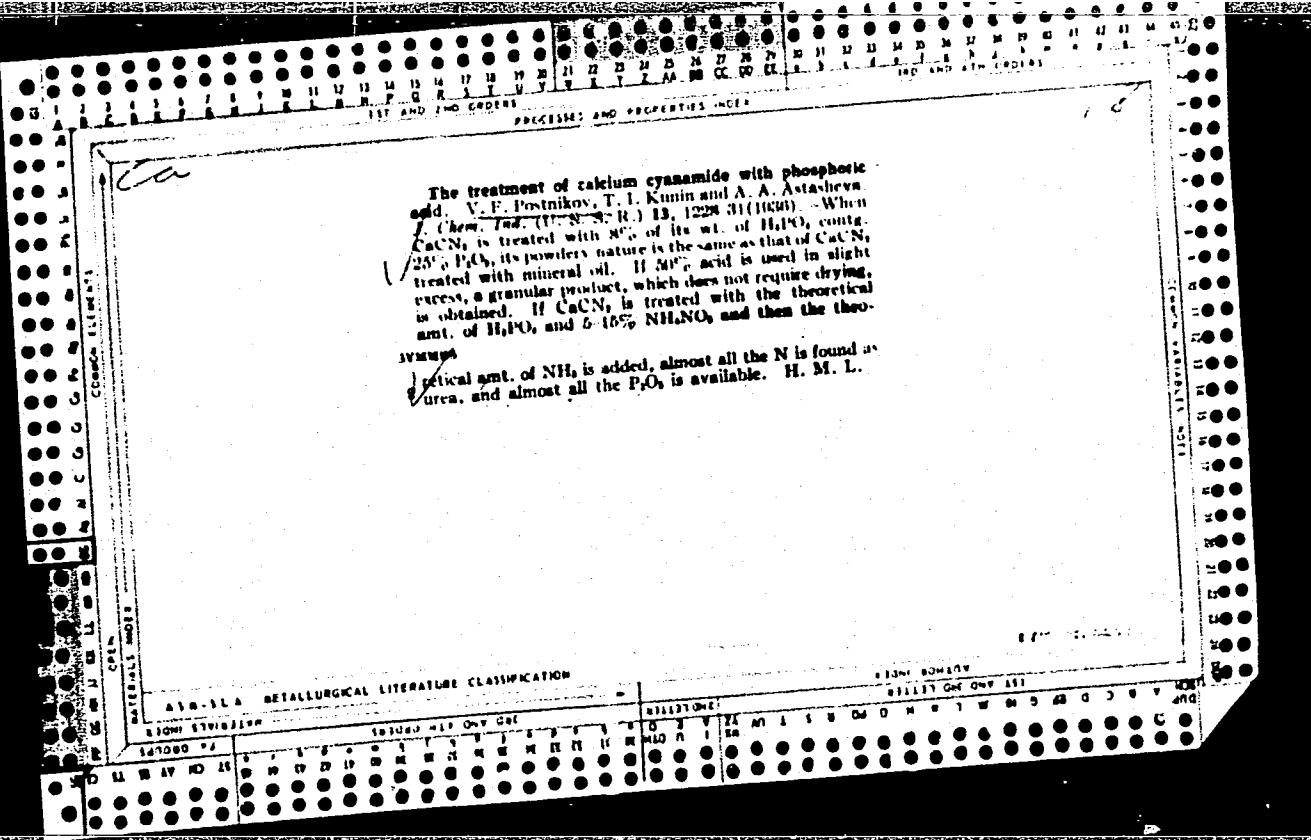
CA

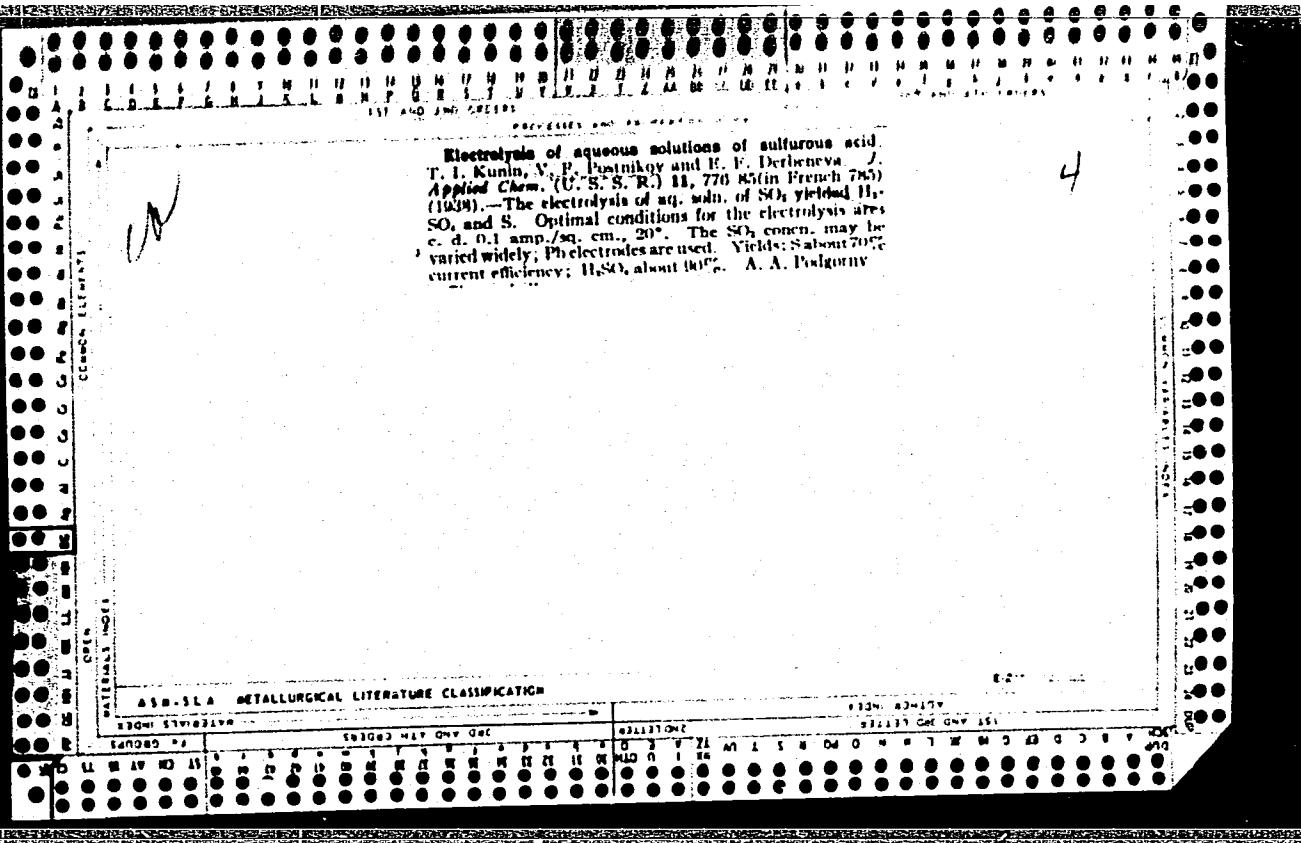
The heat balance of the Beskov [superphosphate] chamber. V. F. Postnikov and V. A. Mikhailov. *Trans. Inst. Chem. Tech. Irkutsk* (U. S. S. R.) 1940, No. 3, 93-102.—The calcn. of the heat balance confirmed the contention that in the reaction between apatite and H_2SO_4 , $CaSO_4 \cdot 0.5H_2O$ is formed instead of $CaSO_4 \cdot 2H_2O$. The Al silicate accompanying the apatite used for the expts. was found to be $Al_2O_3 \cdot 2SiO_2$, instead of the arbitrarily accepted Al_2SiO_5 as used by other investigators. Increase to 70° of the temp. of H_2SO_4 used for the decompr. of apatite does not change materially the temp. regime of the chamber. This fact is of a great practical importance, since the increased temp. of the acid increases the sepn. of the gaseous F compds. The temp. of H_2SO_4 entering the system should be $30-35^\circ$ in order that an acid of the required temp. shall reach the chamber. W. R. Henn

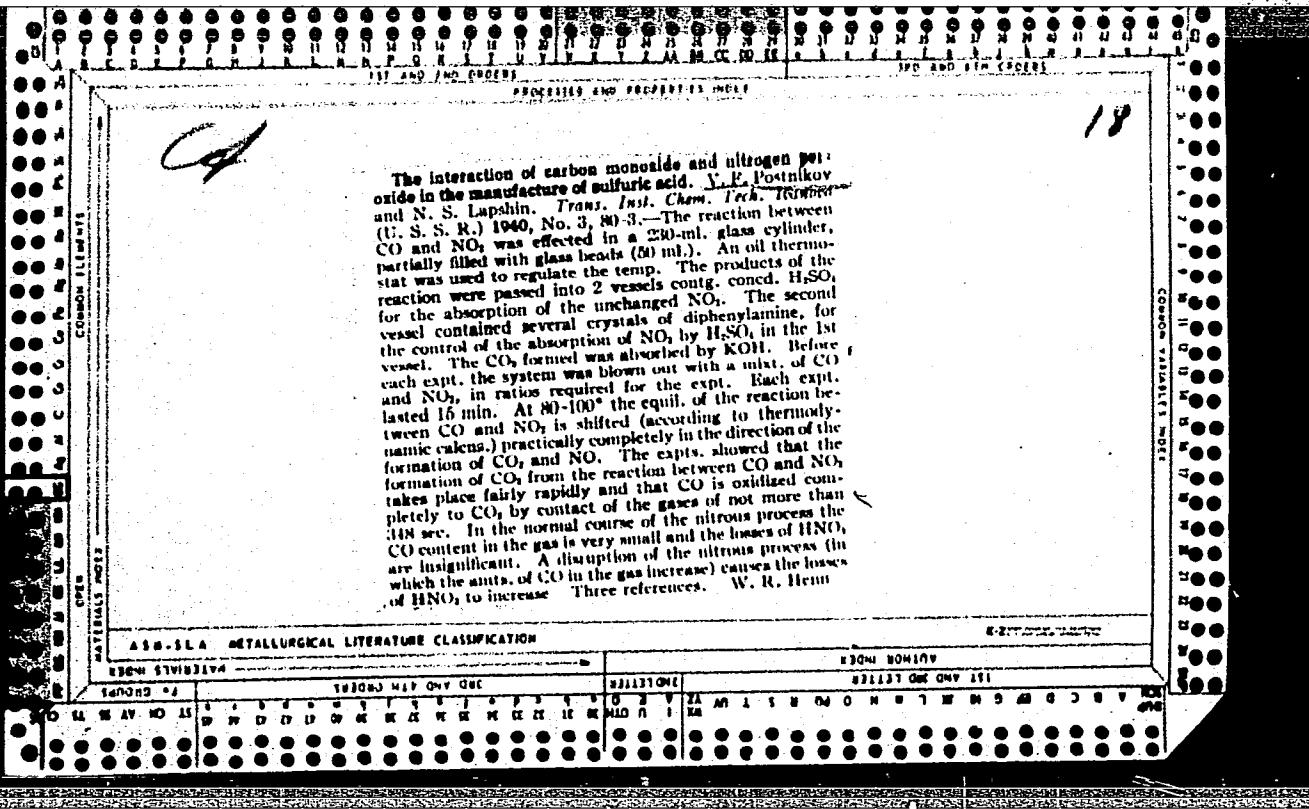
ADM-5A METALLURGICAL LITERATURE CLASSIFICATION

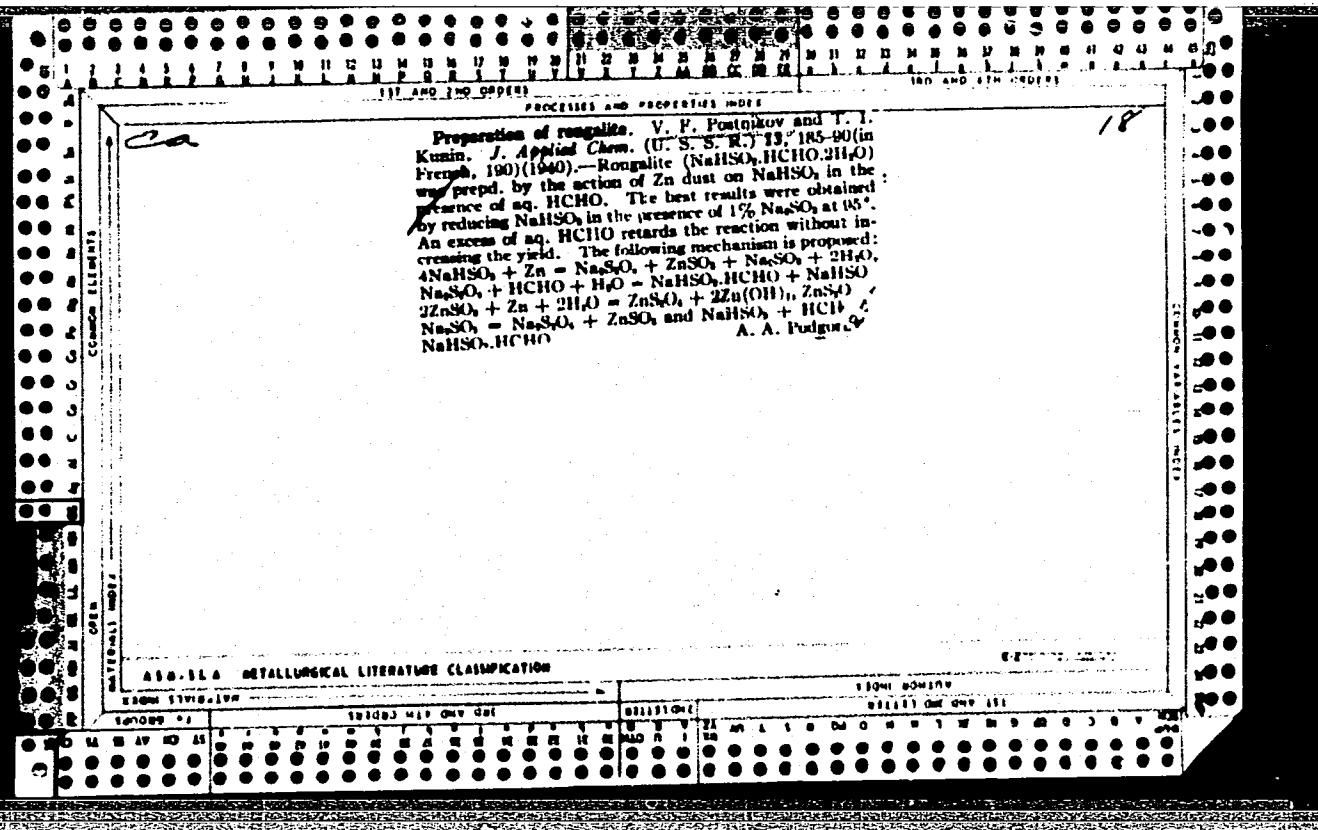


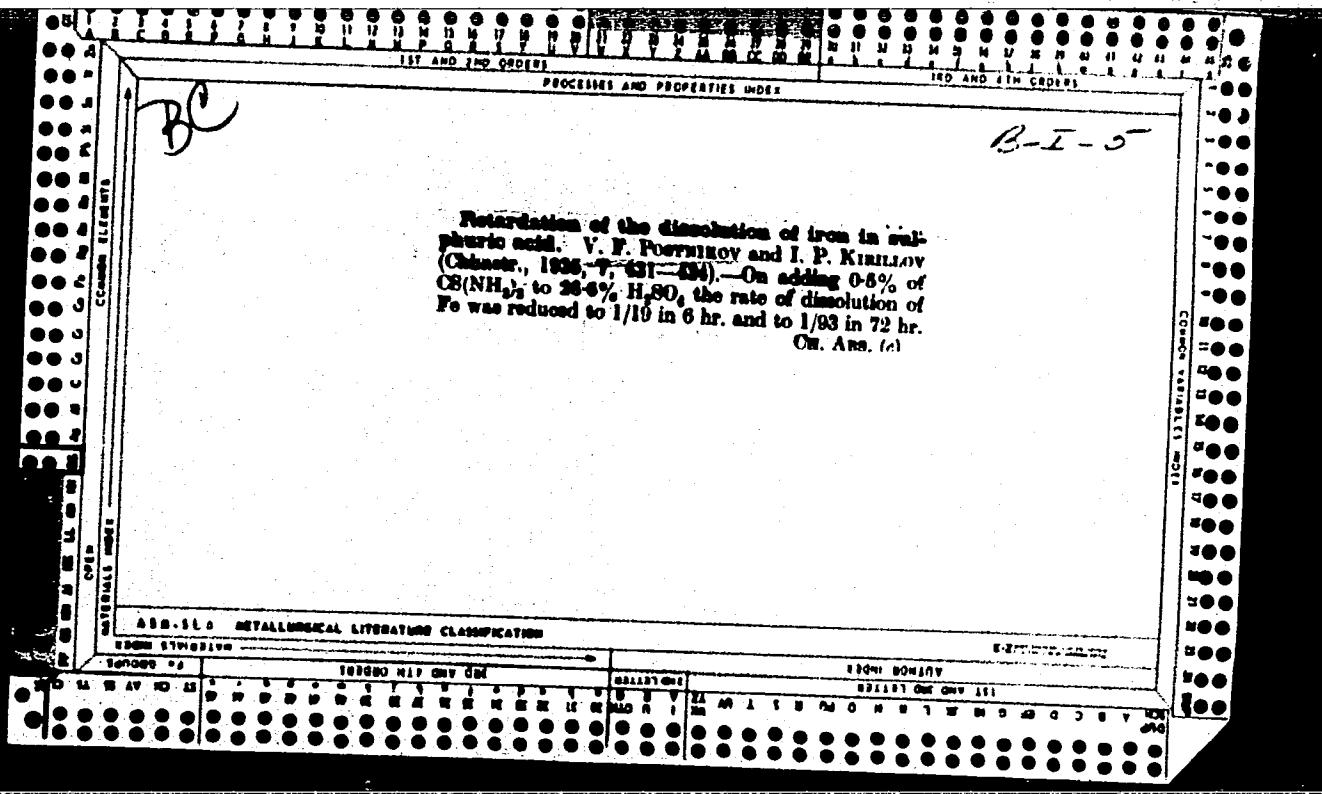


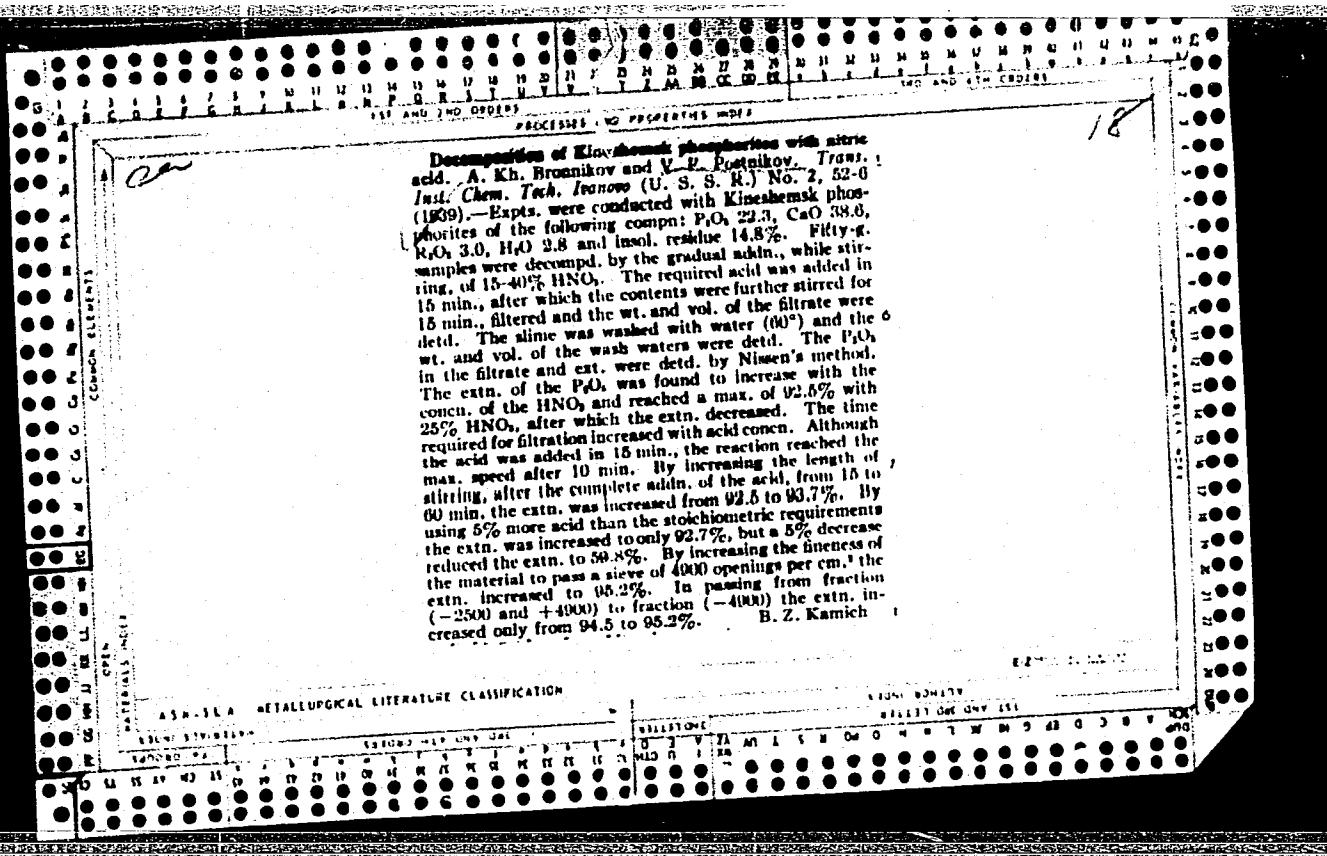


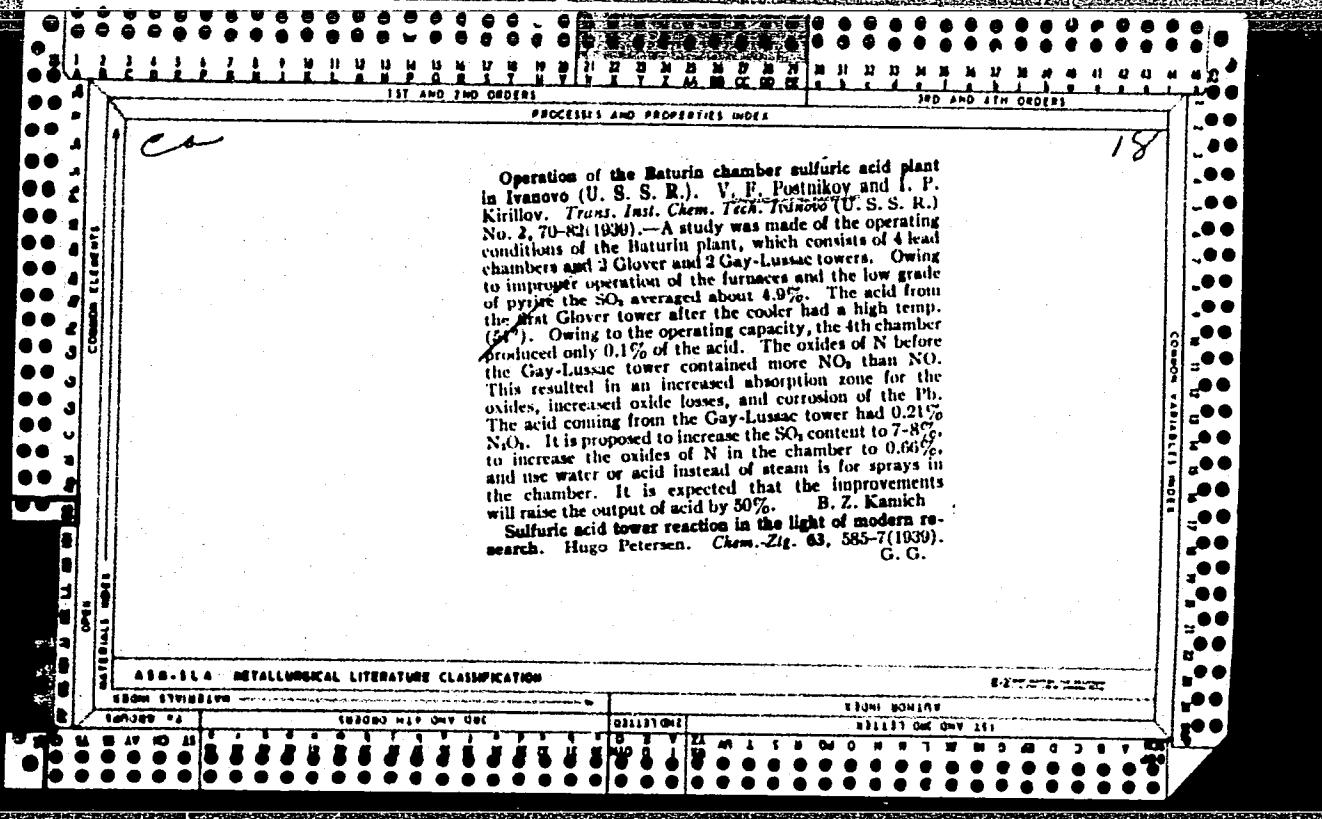


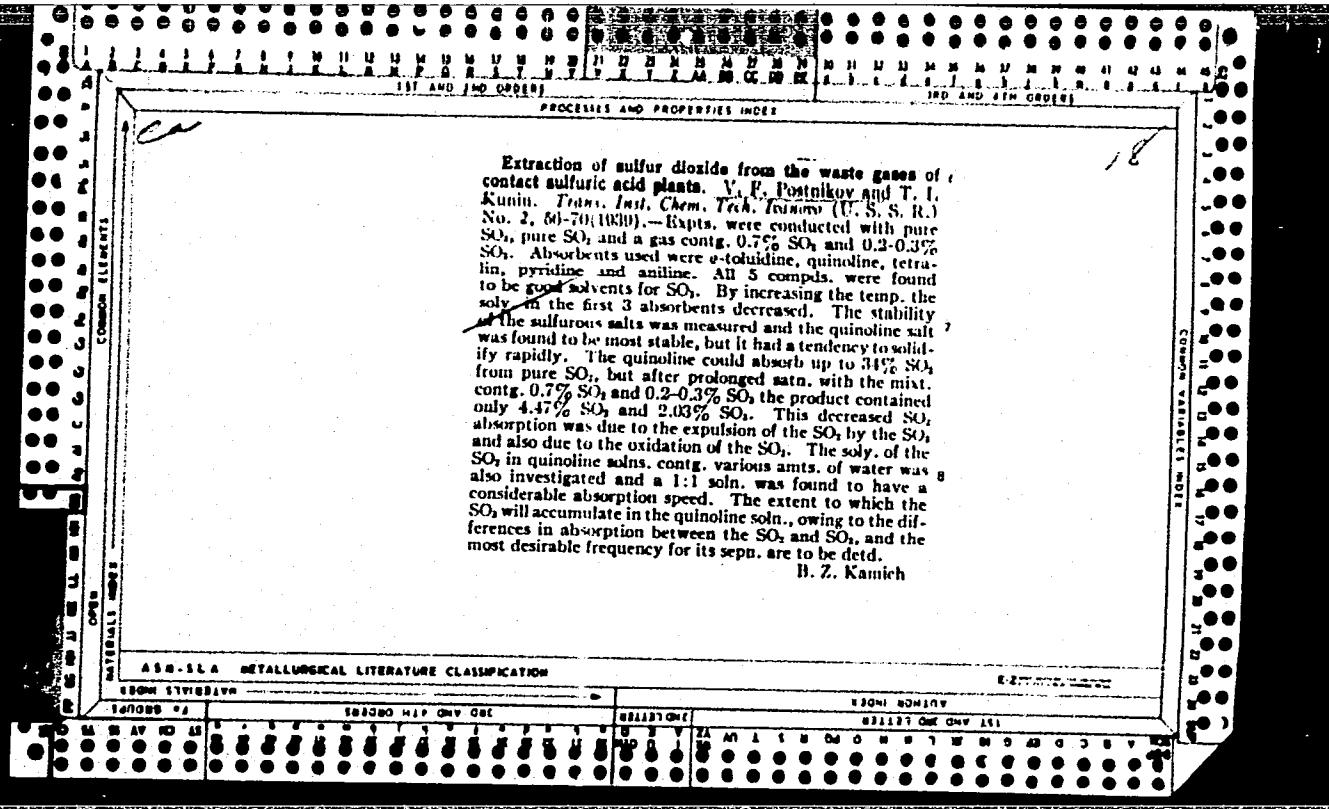


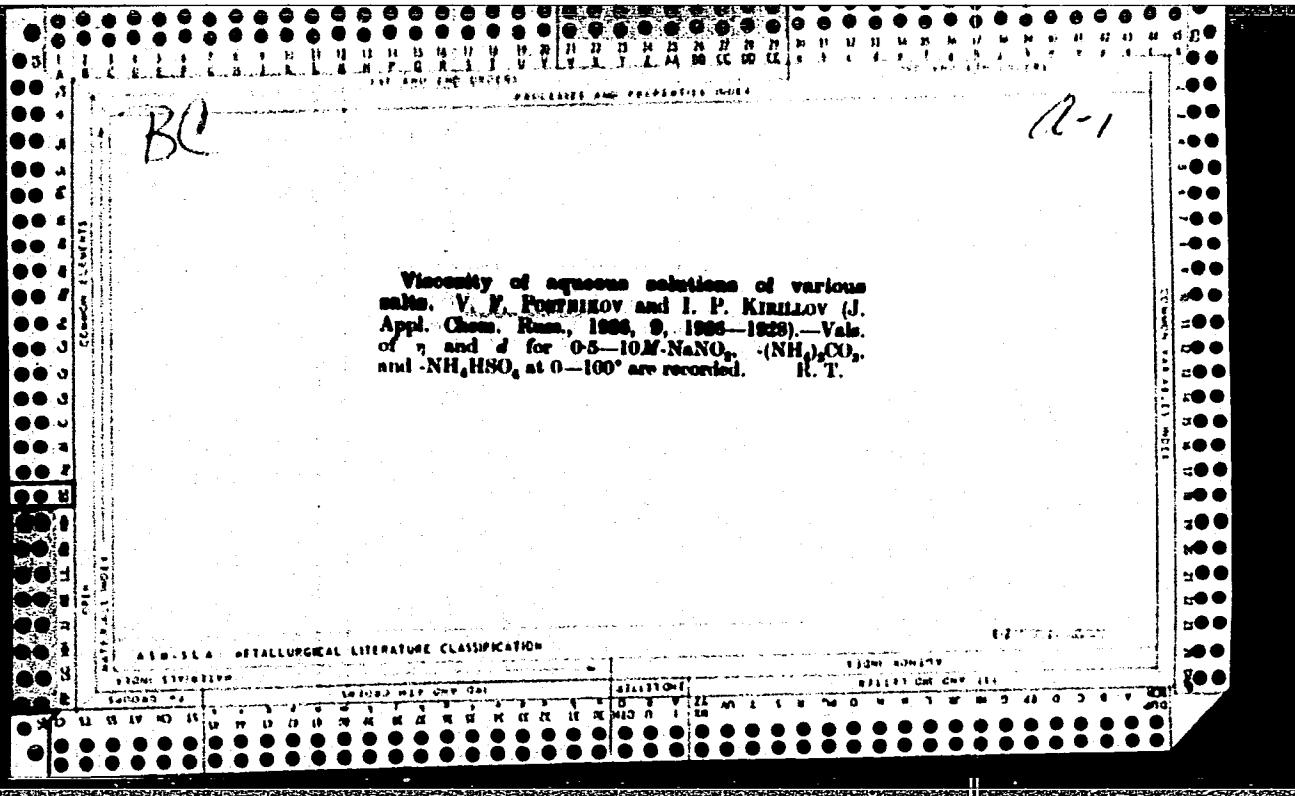


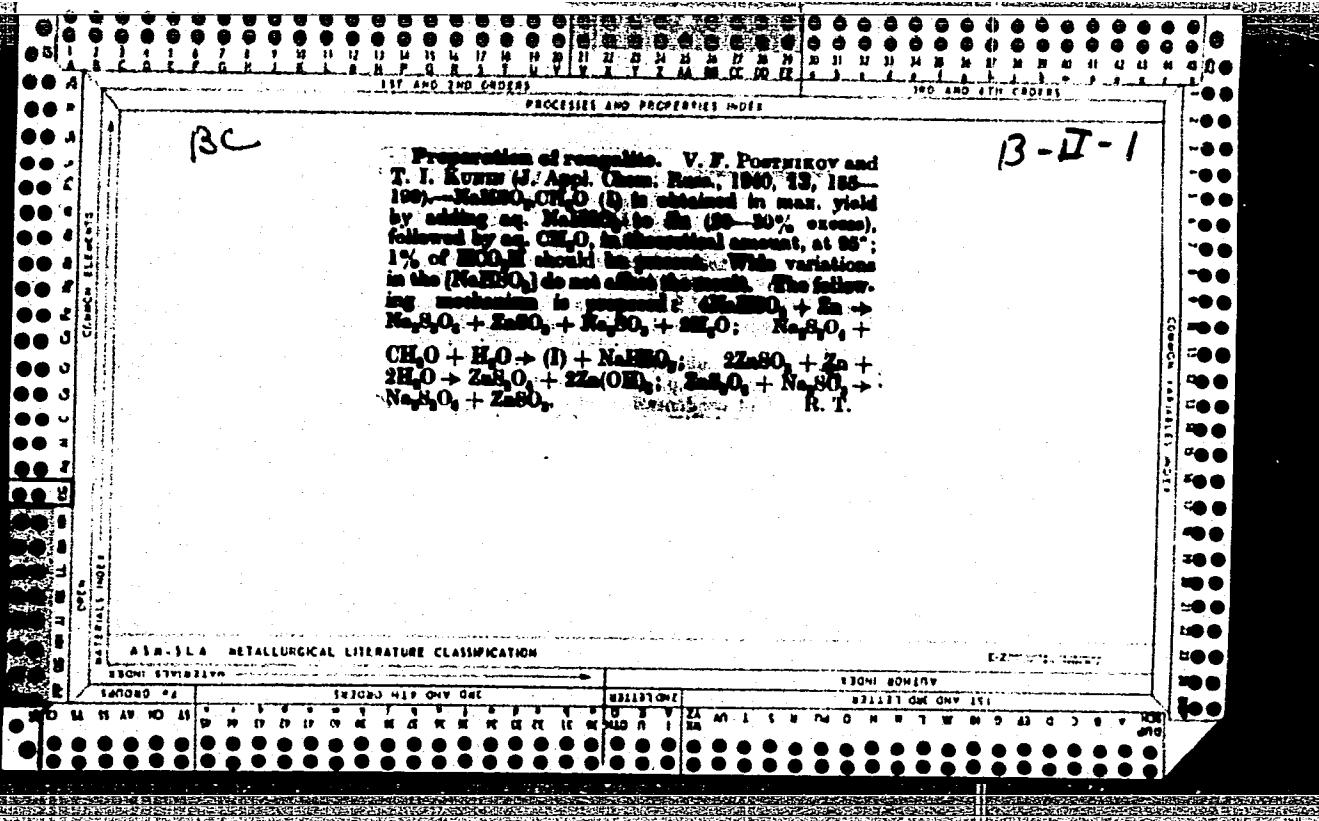


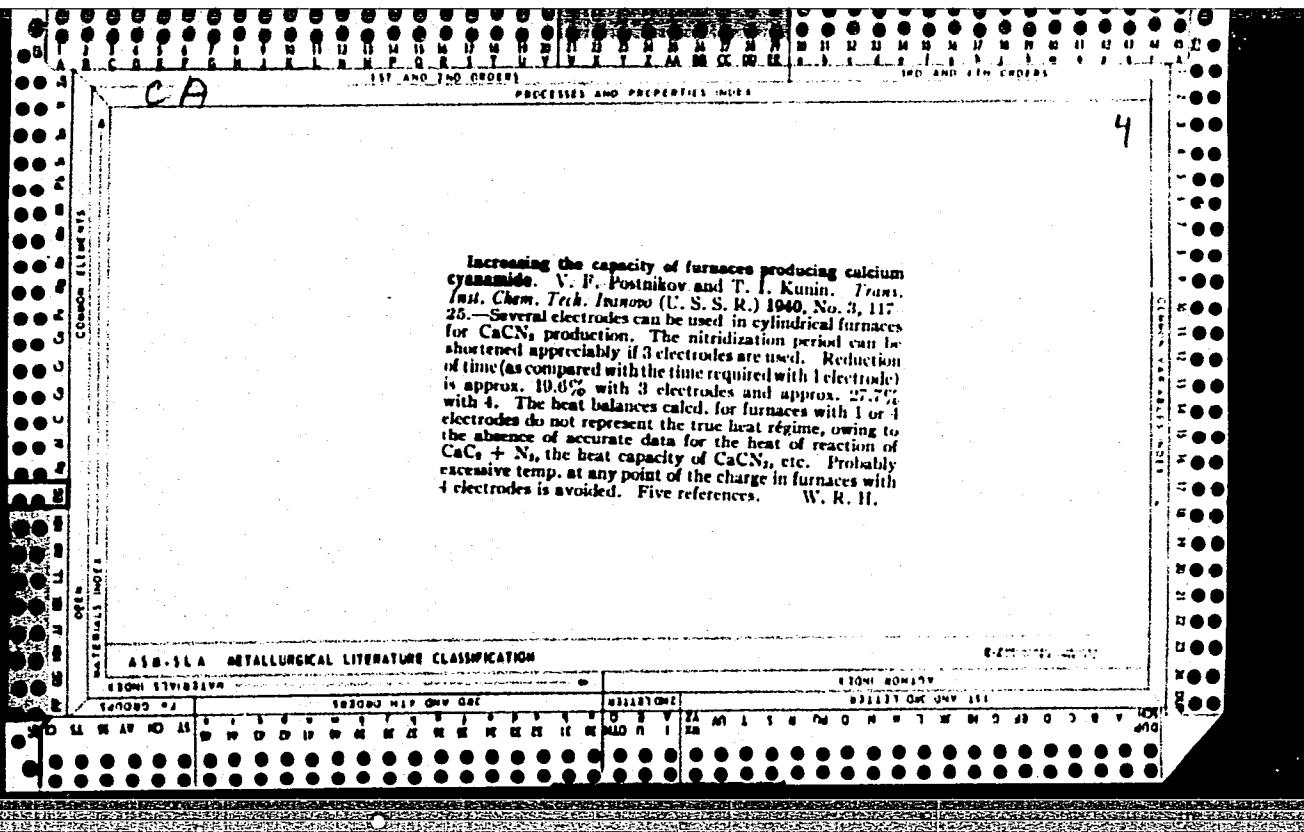


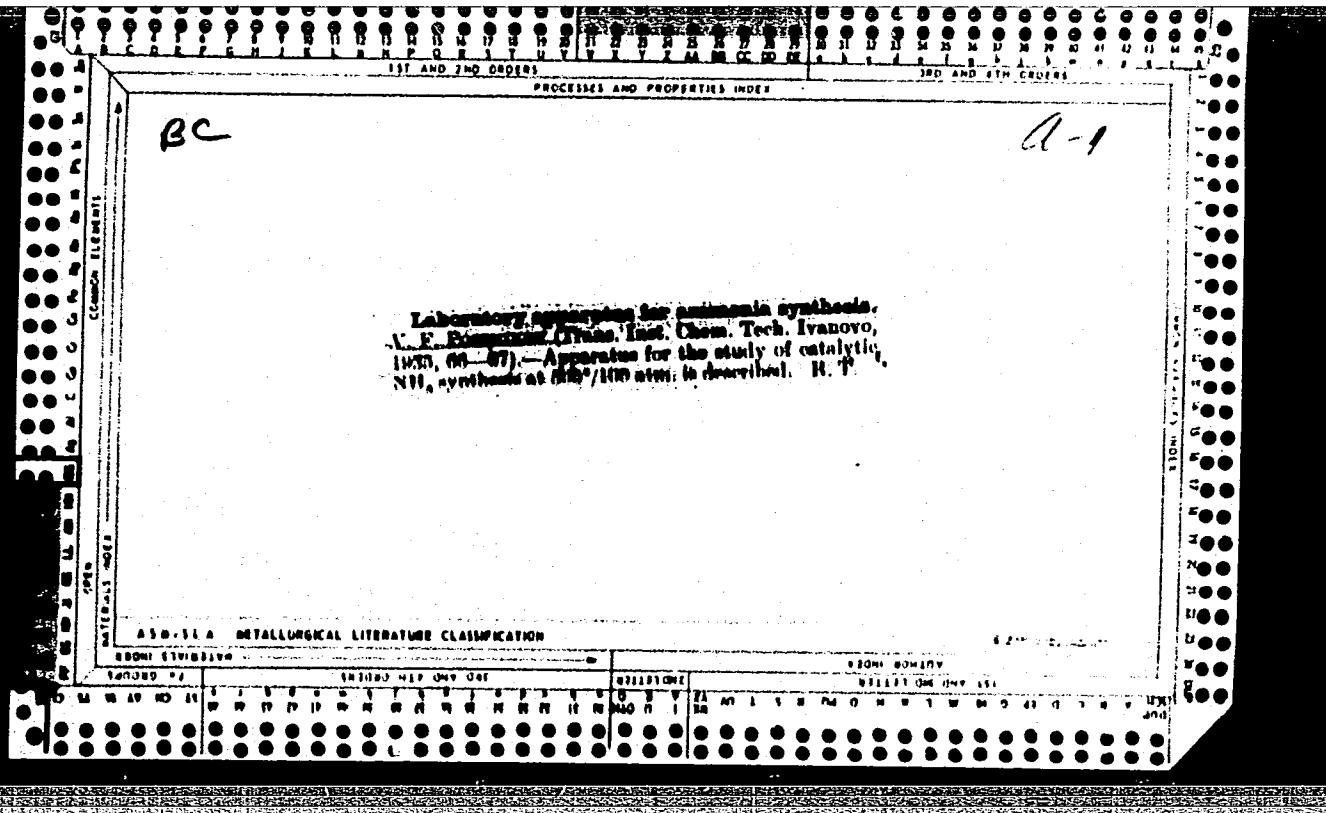


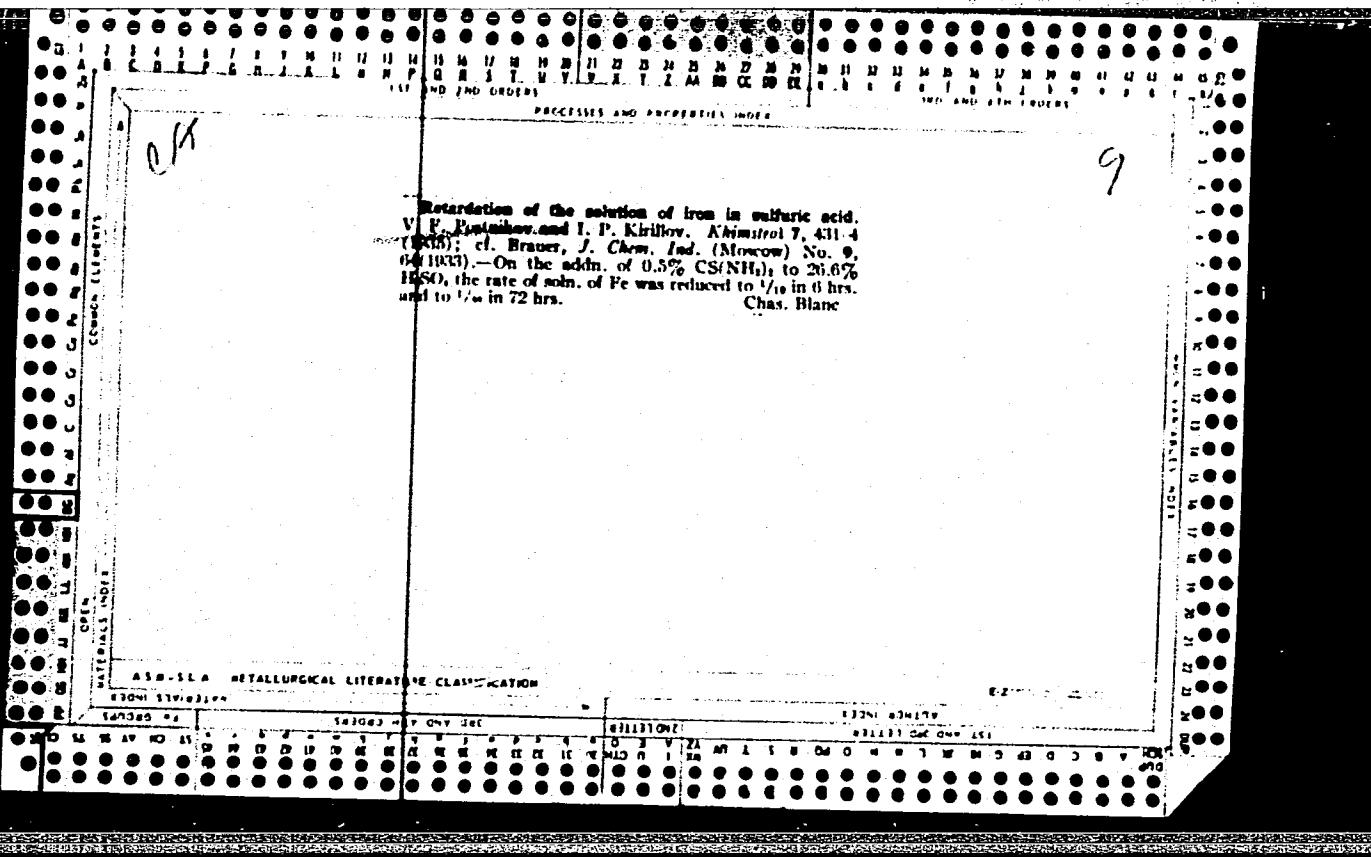


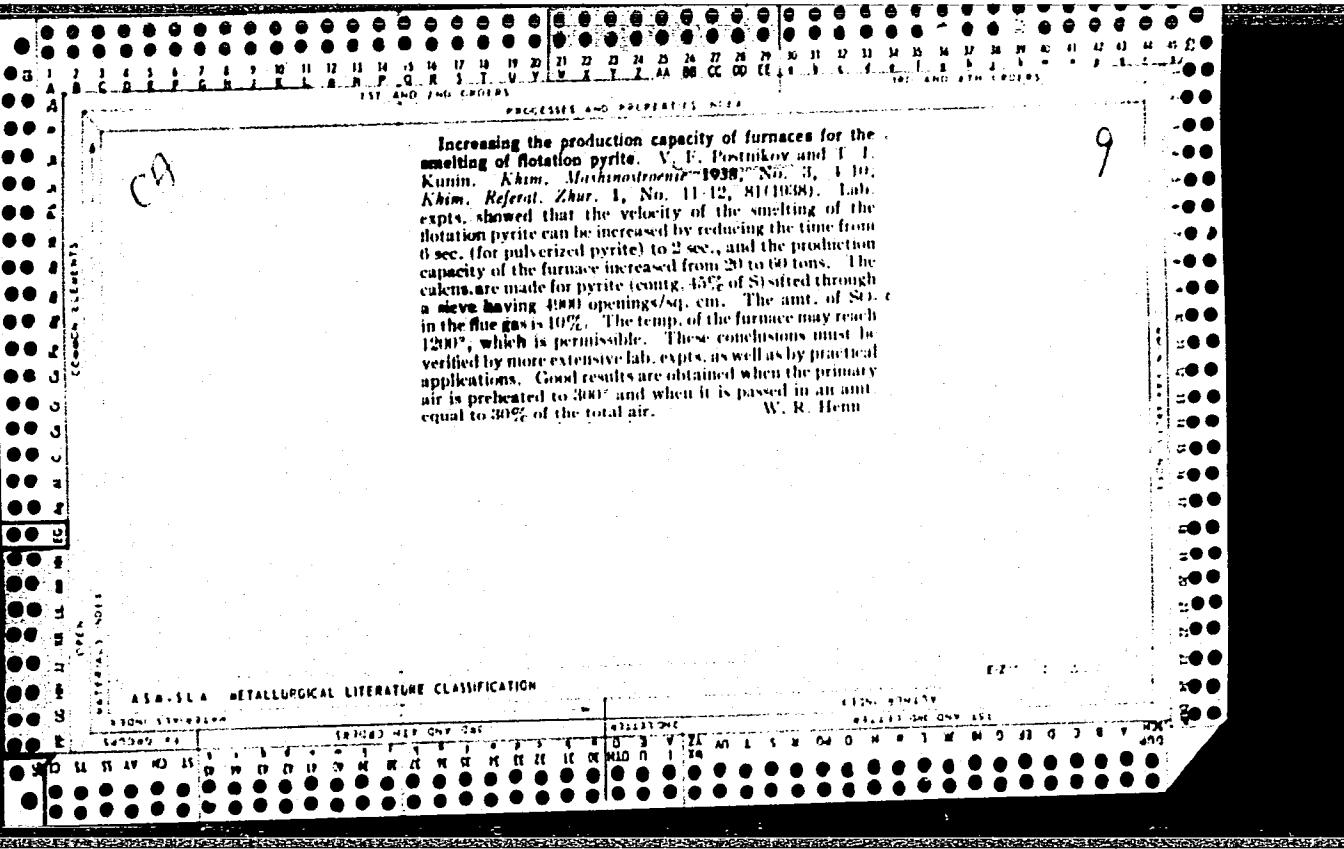


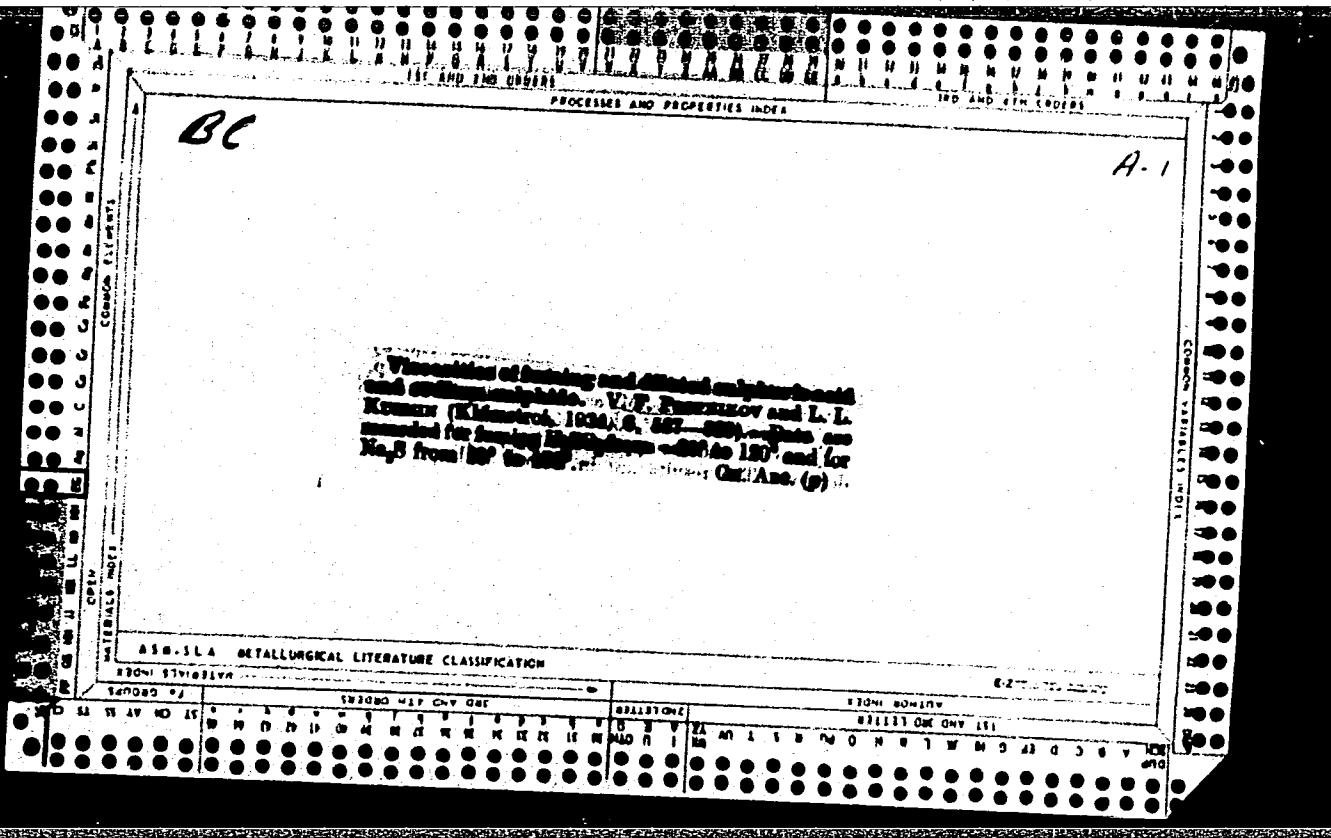


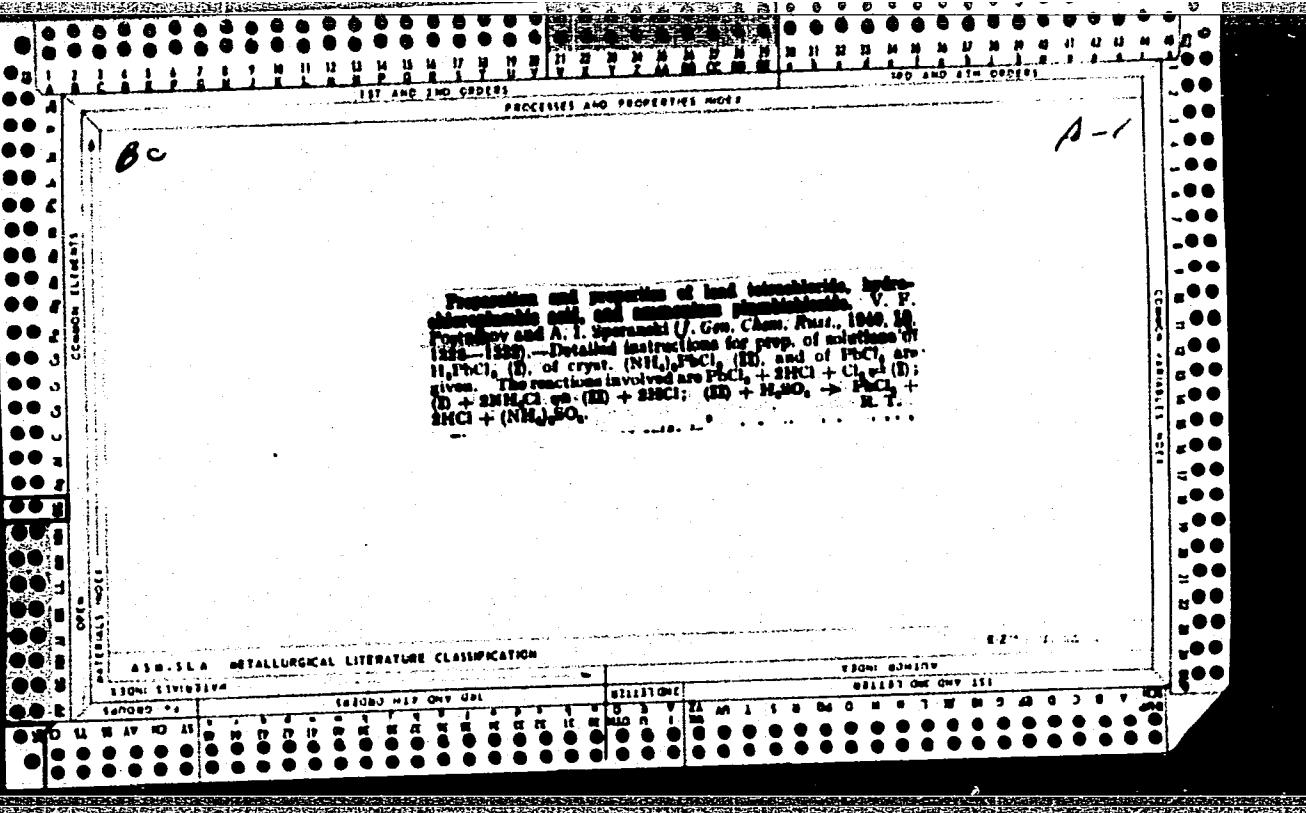


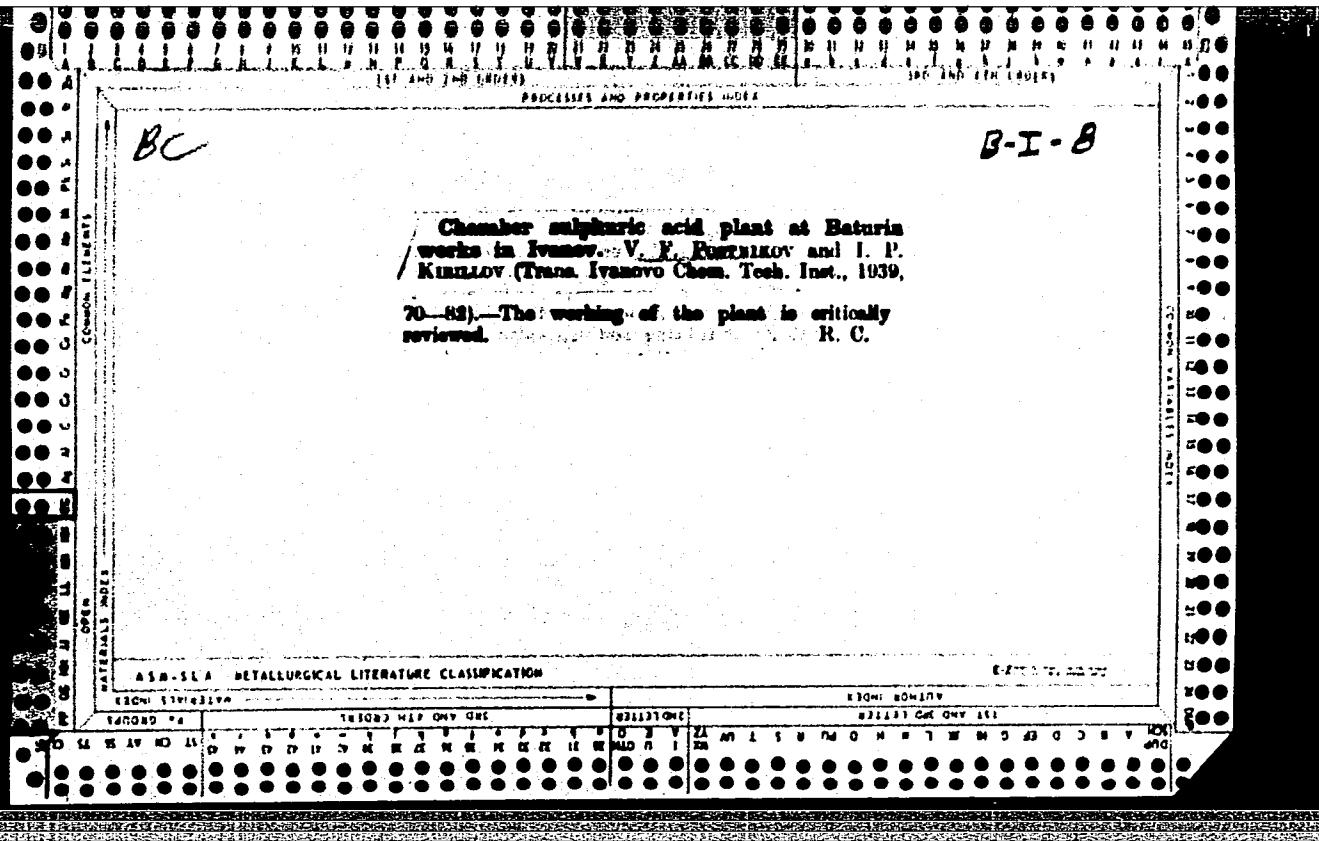


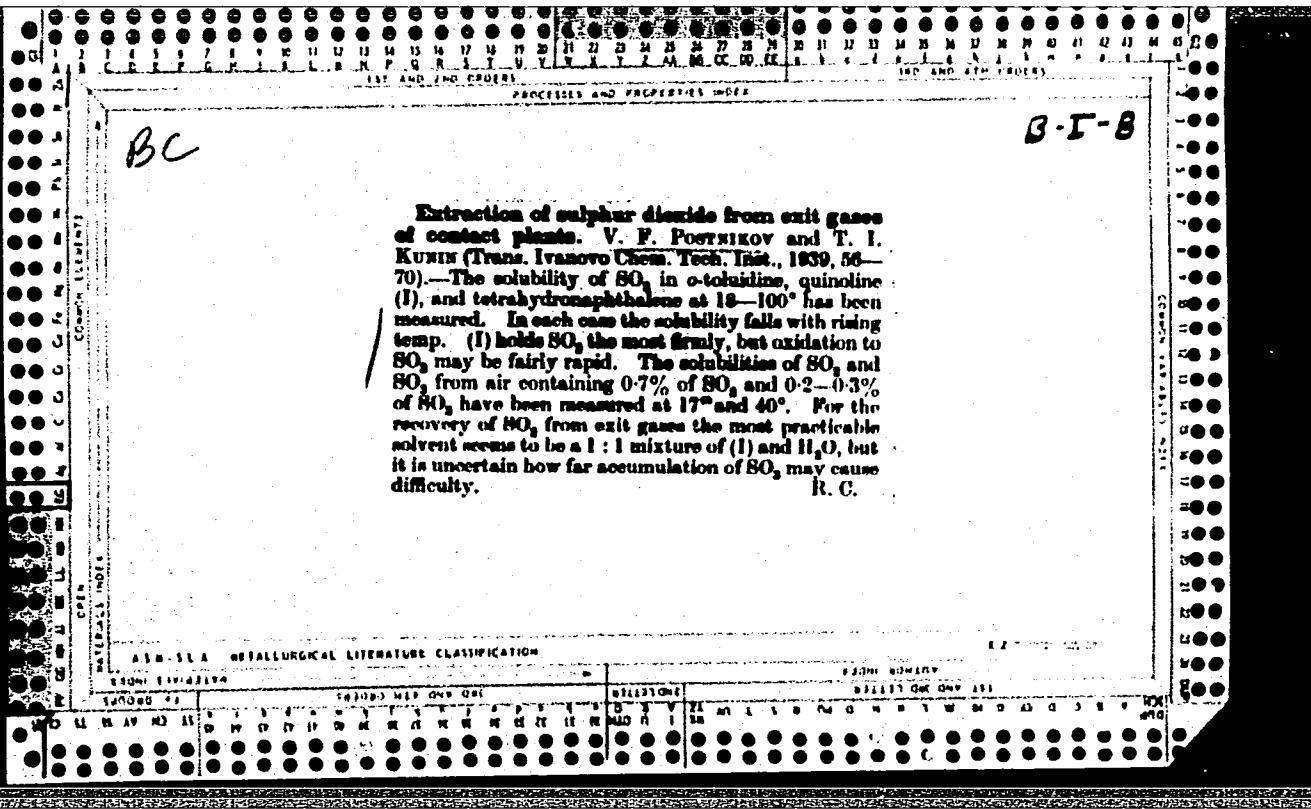


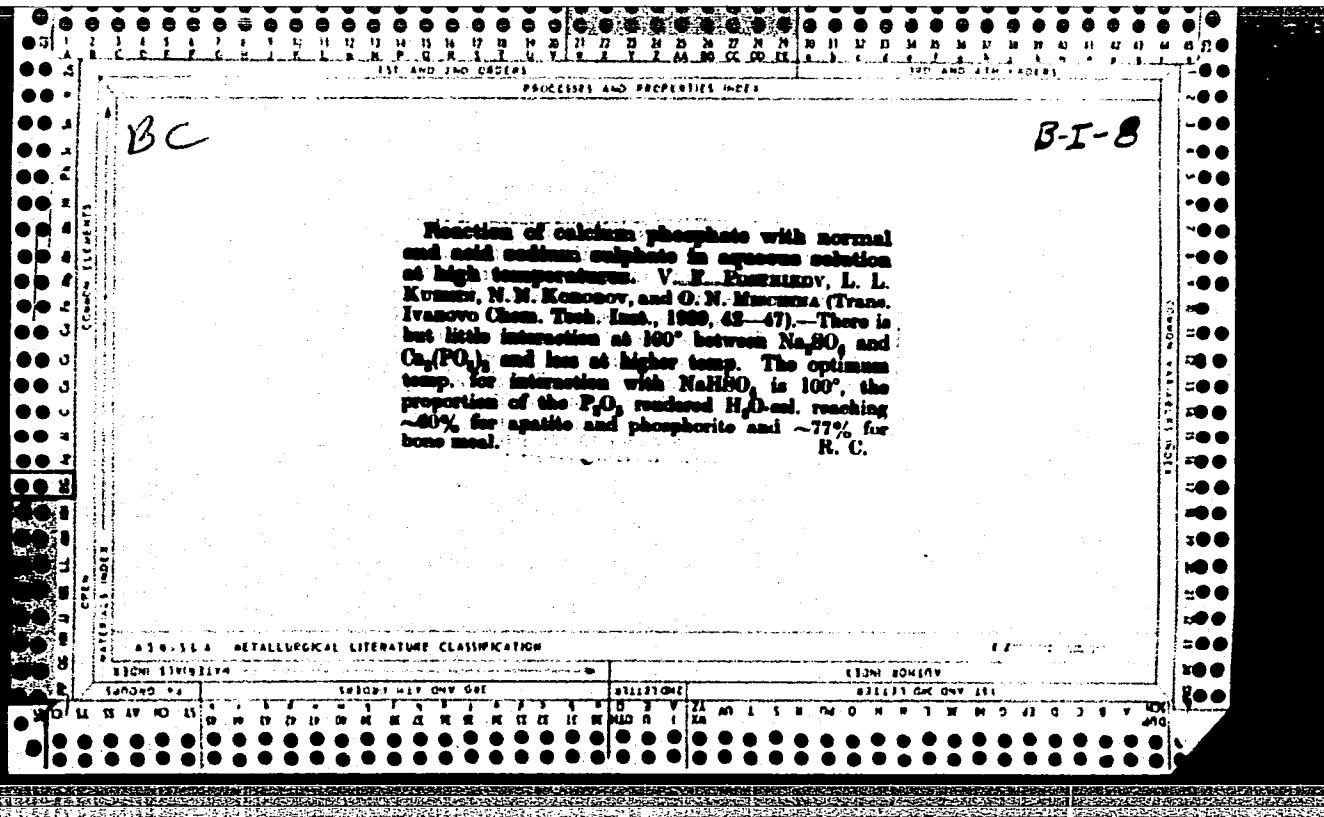


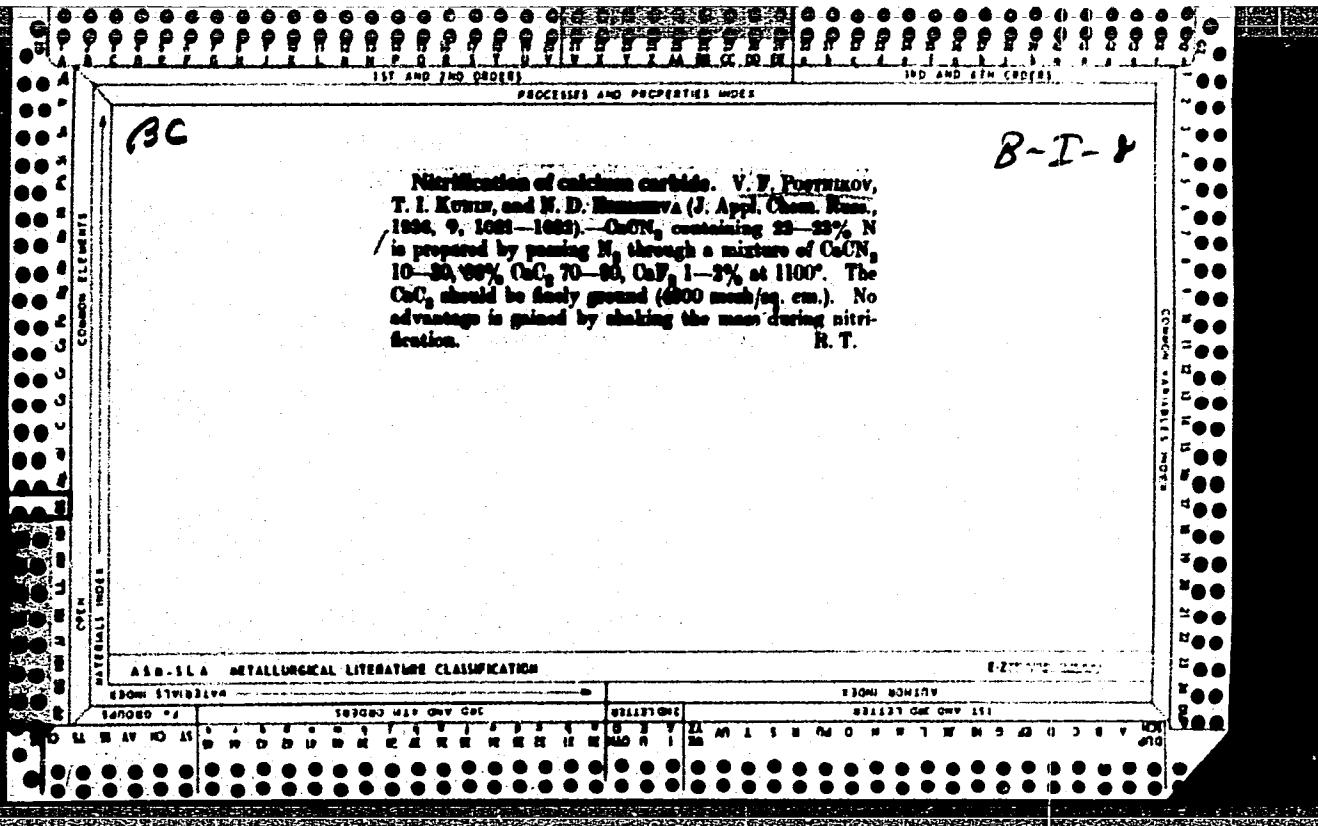


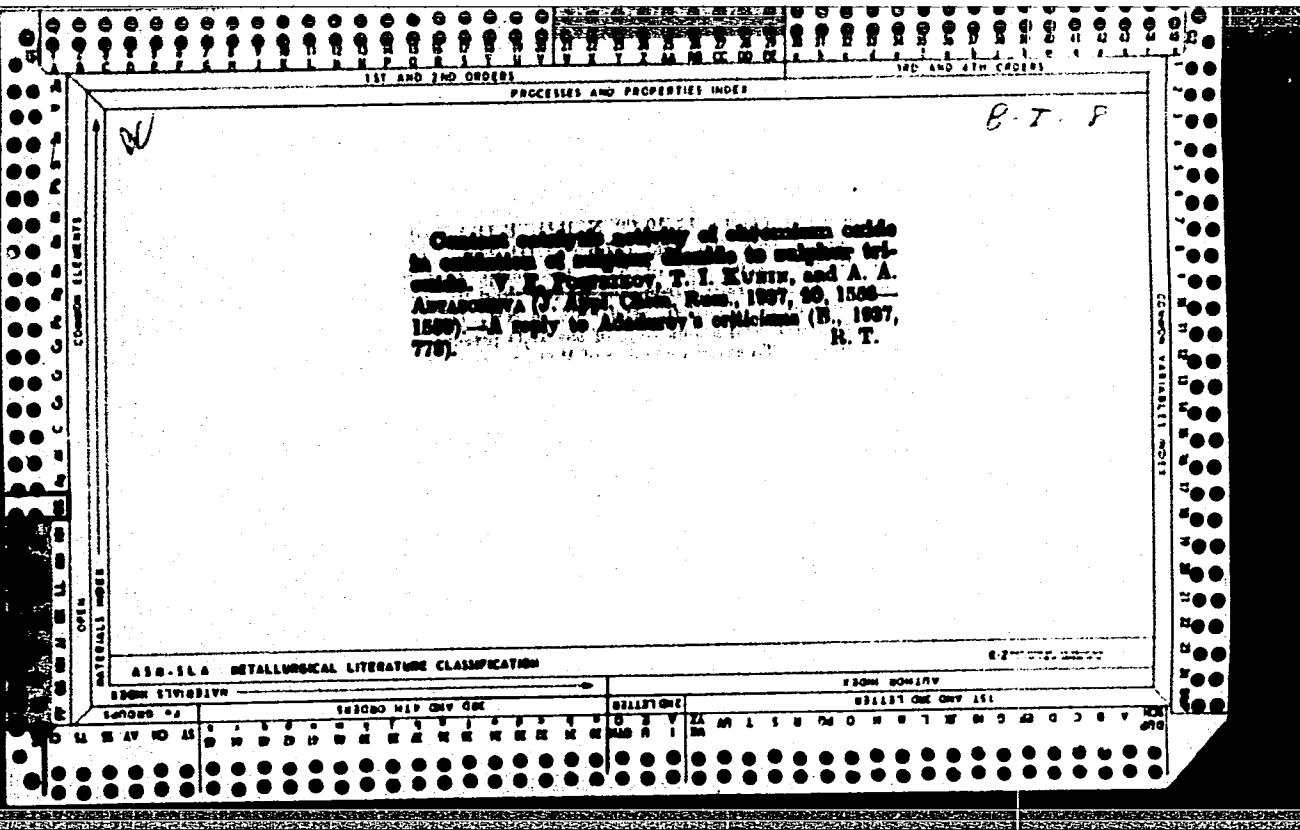


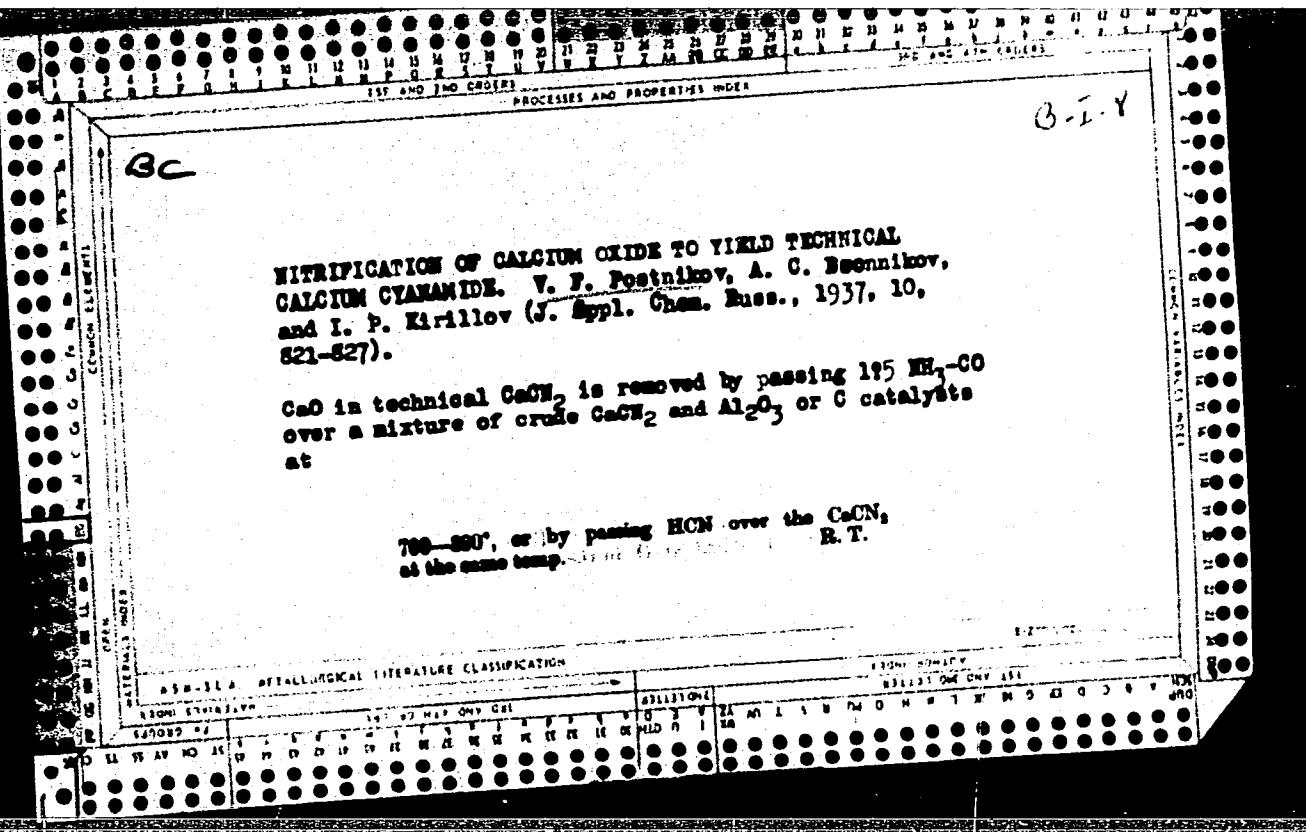


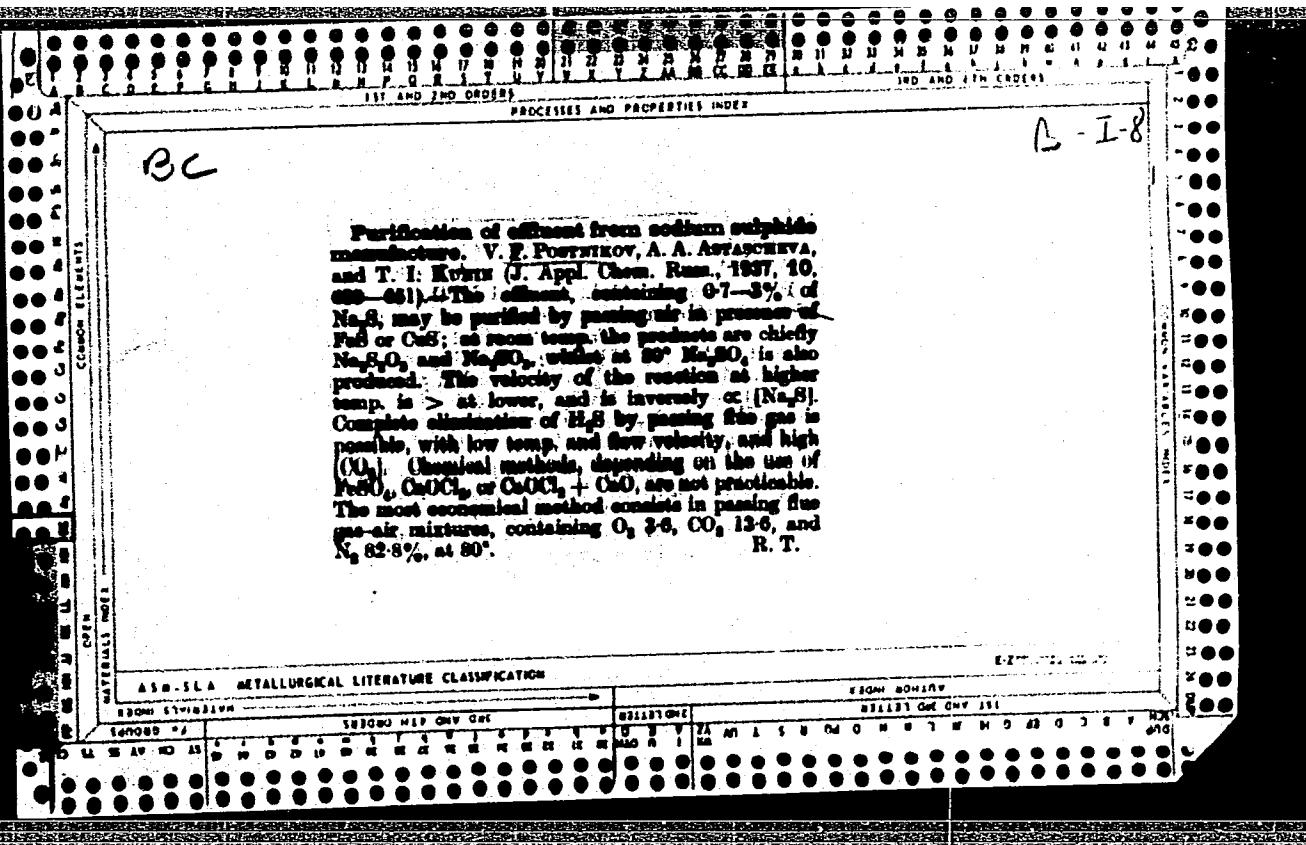


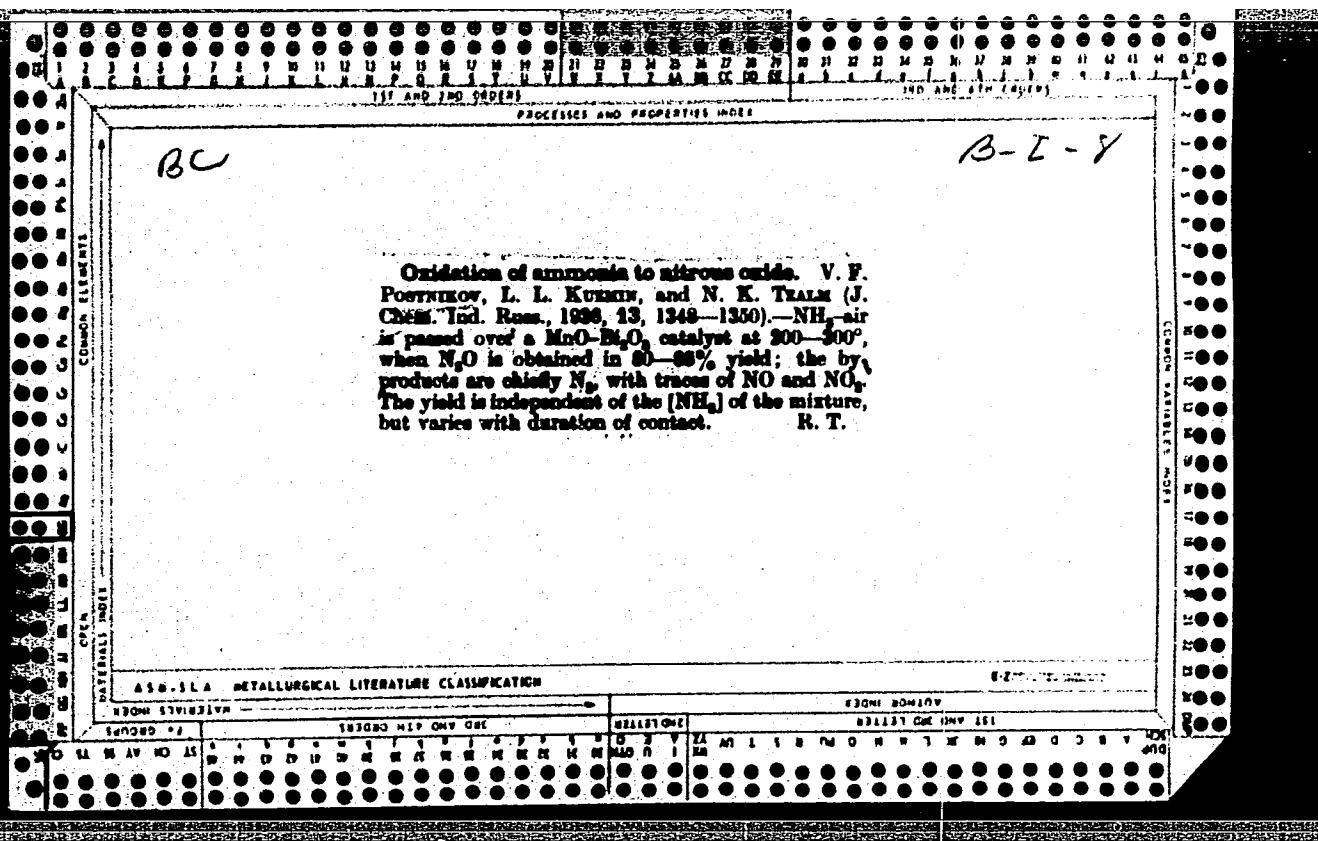


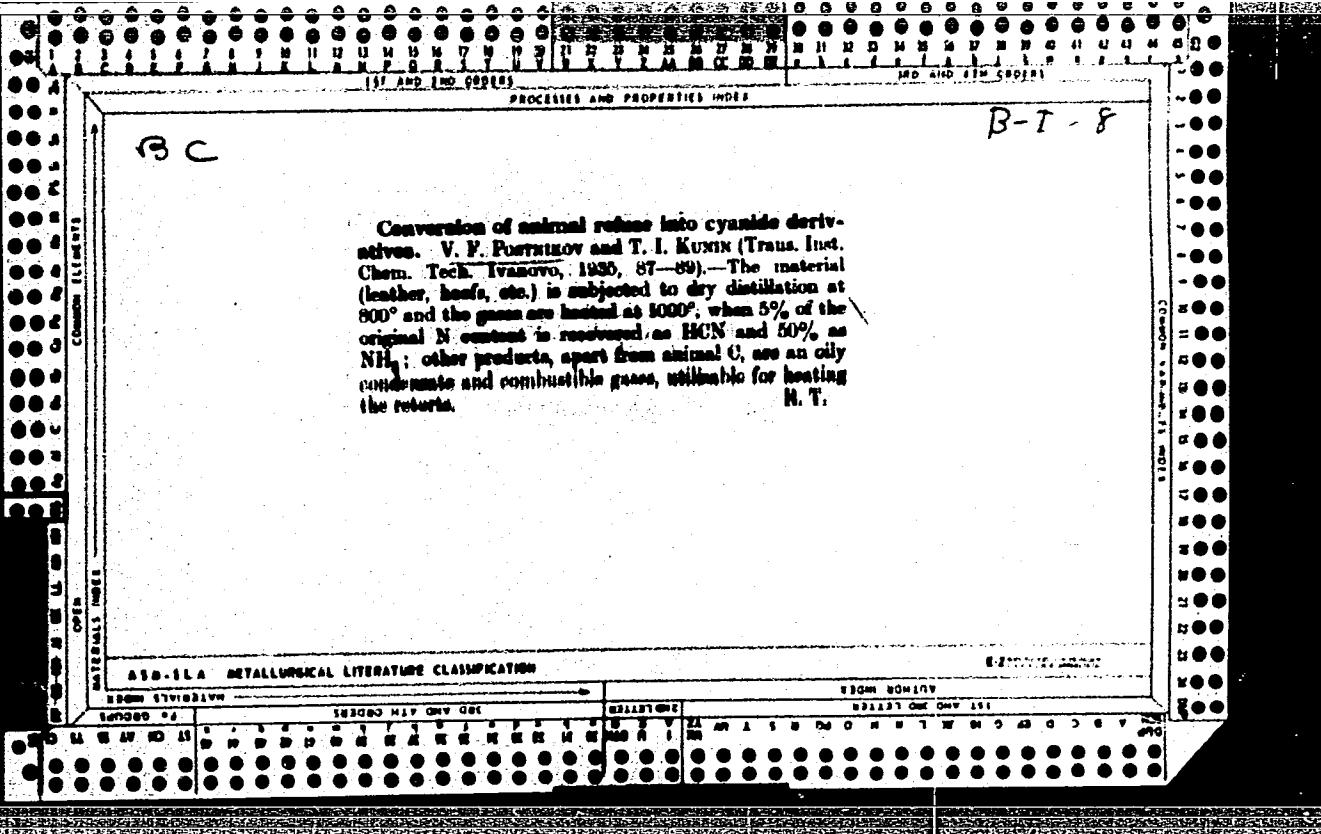


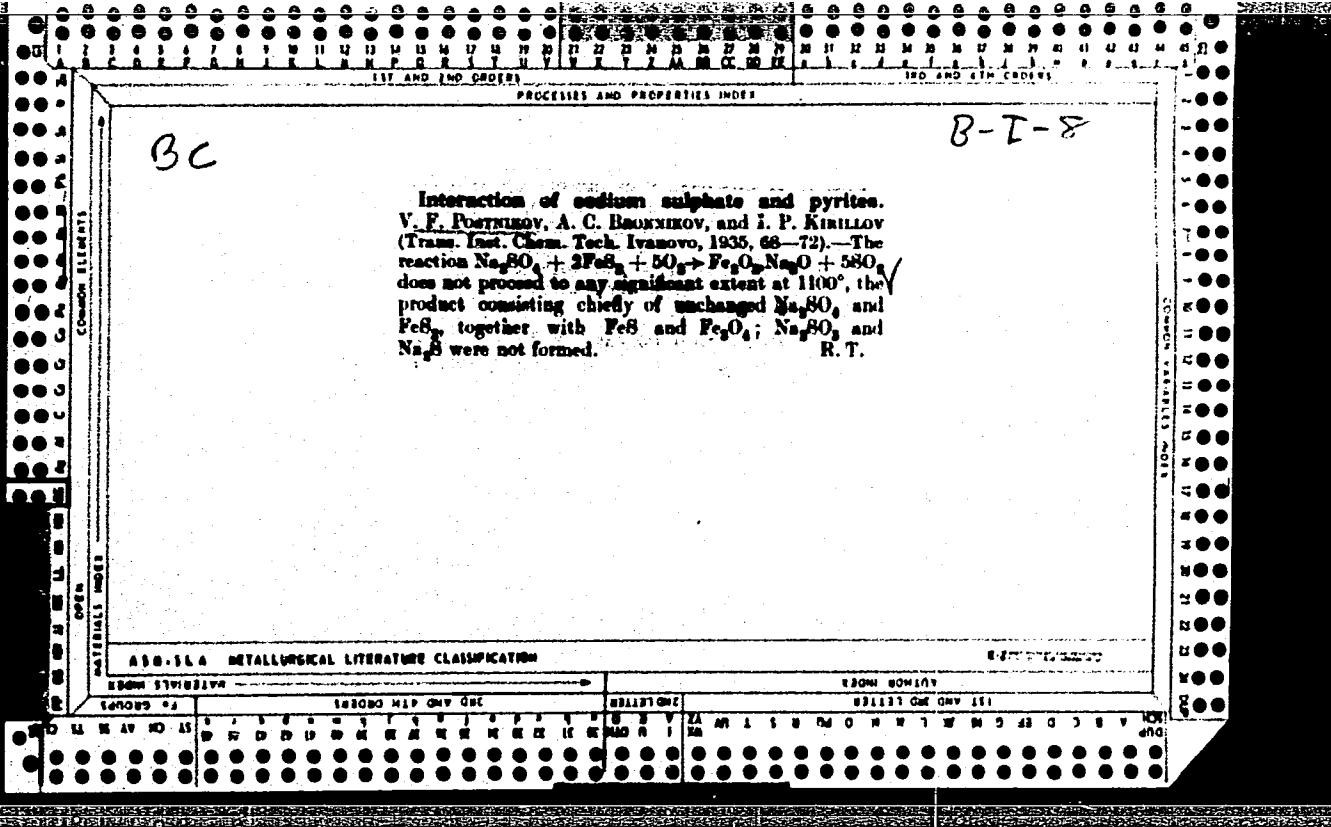


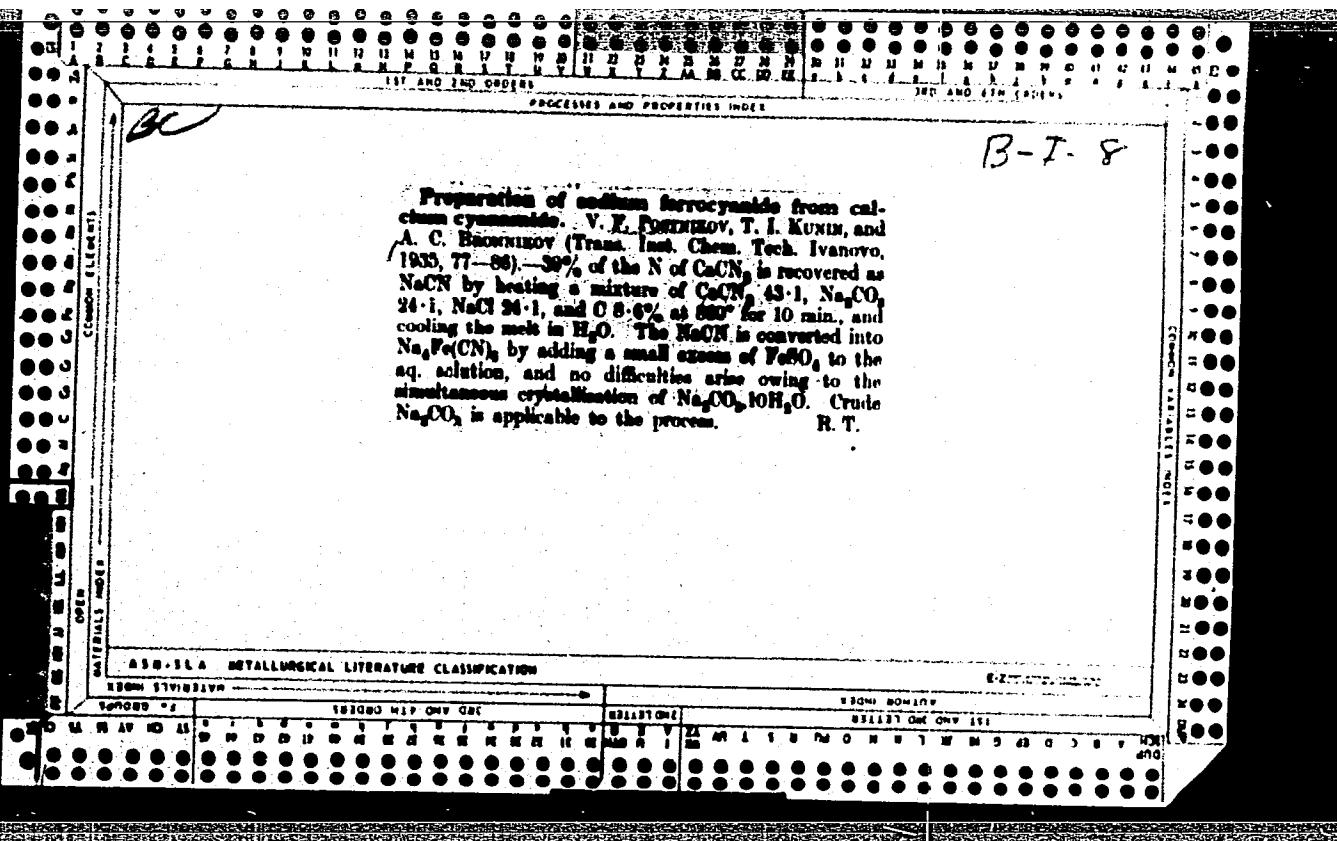


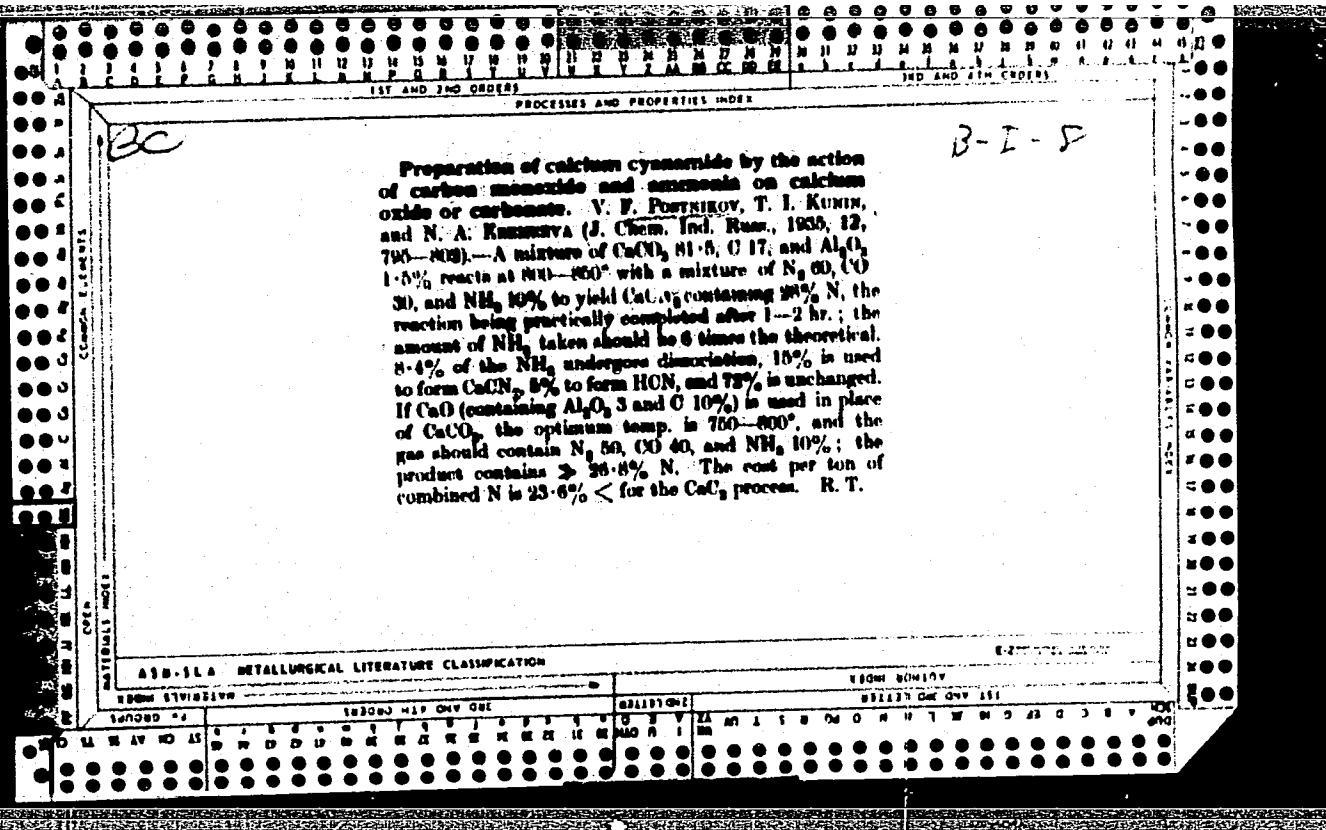


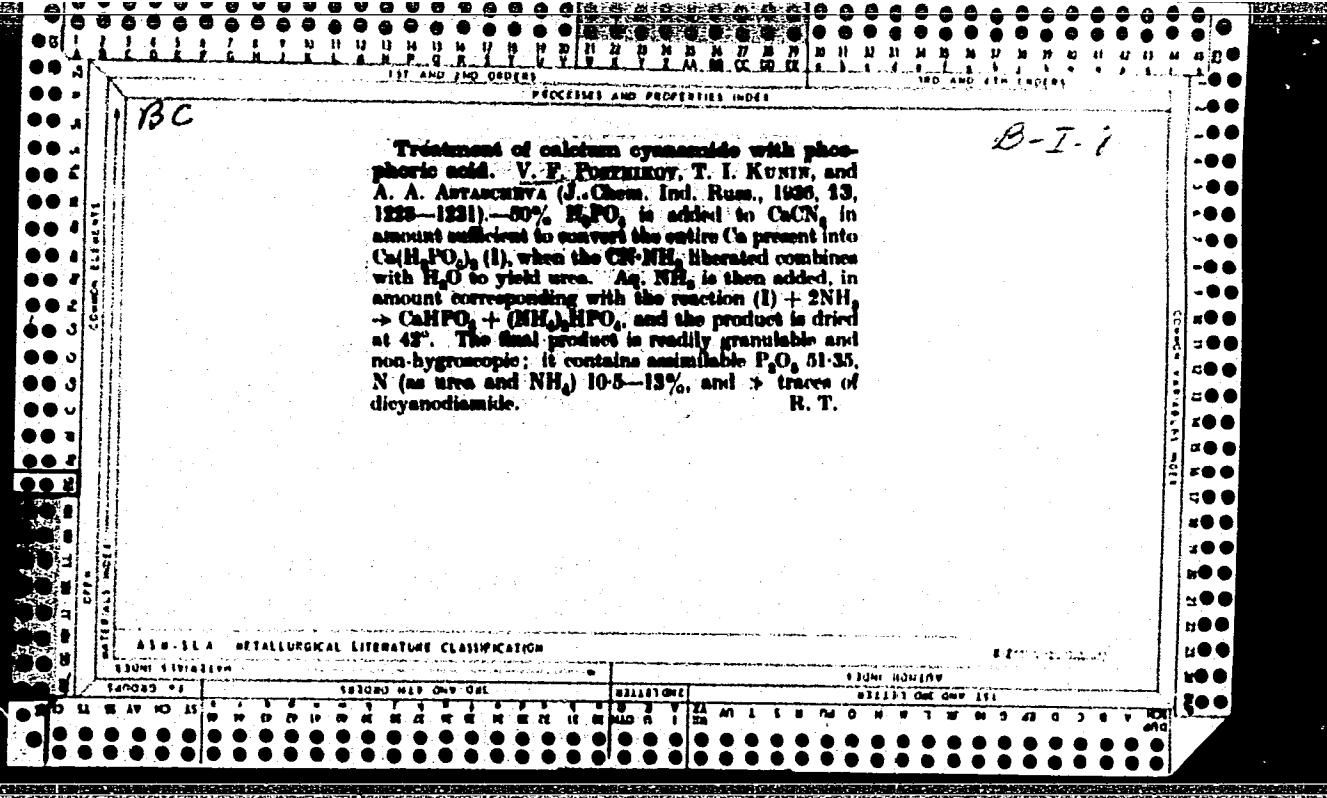


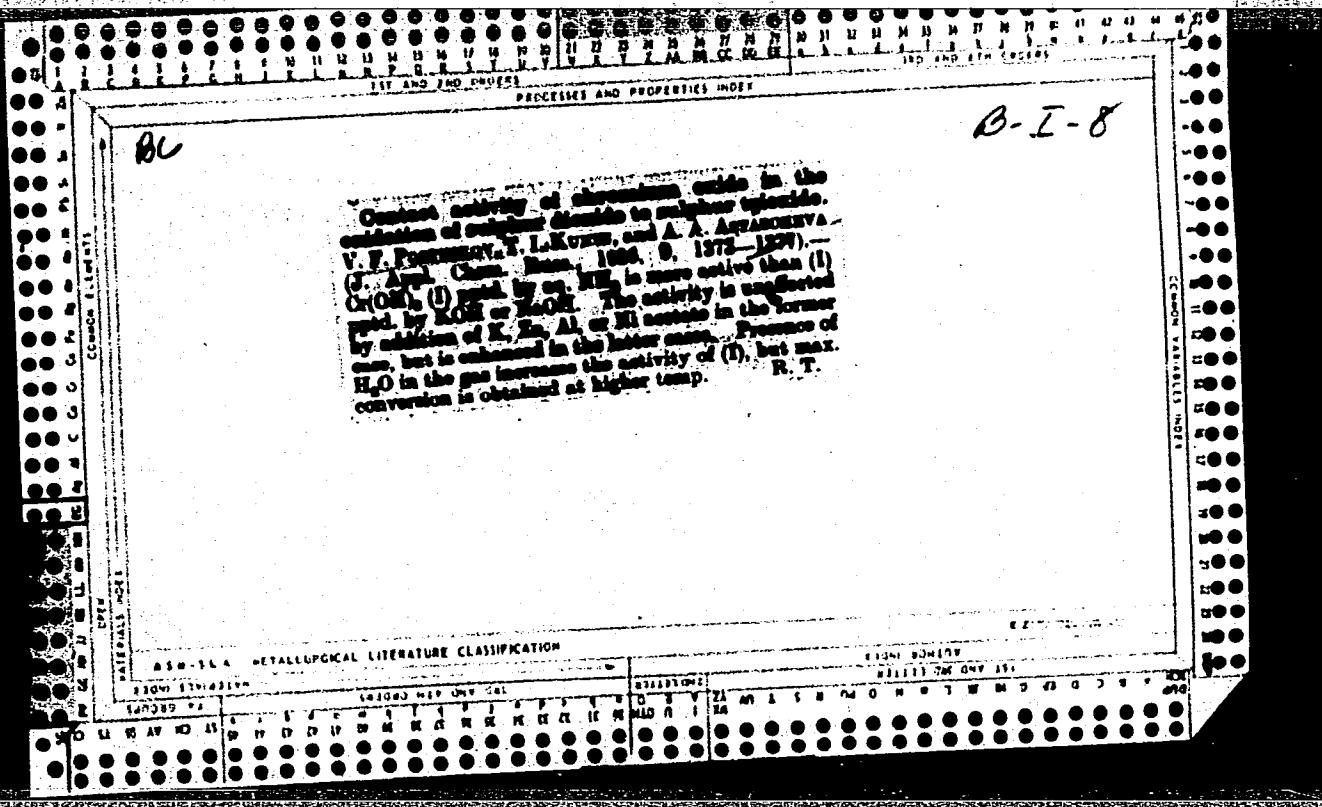


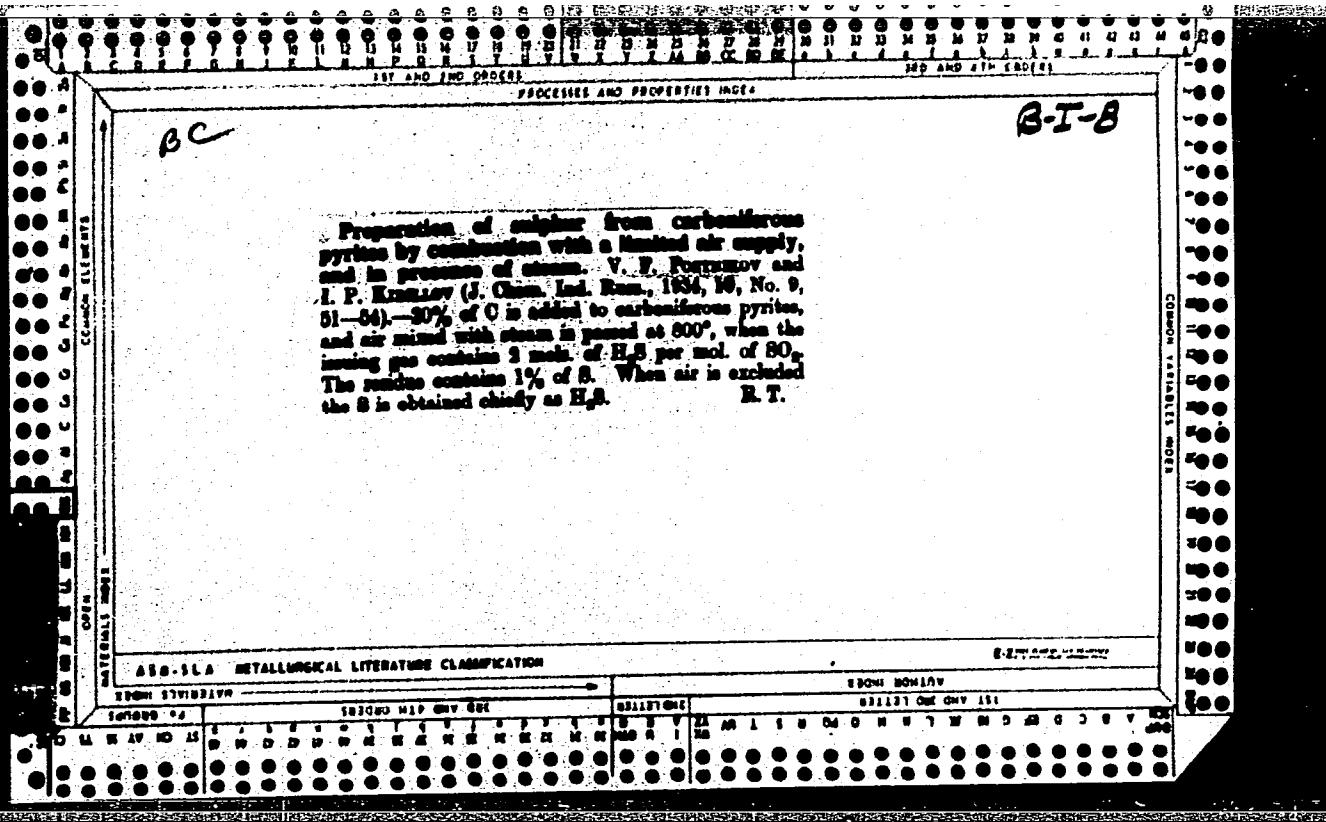






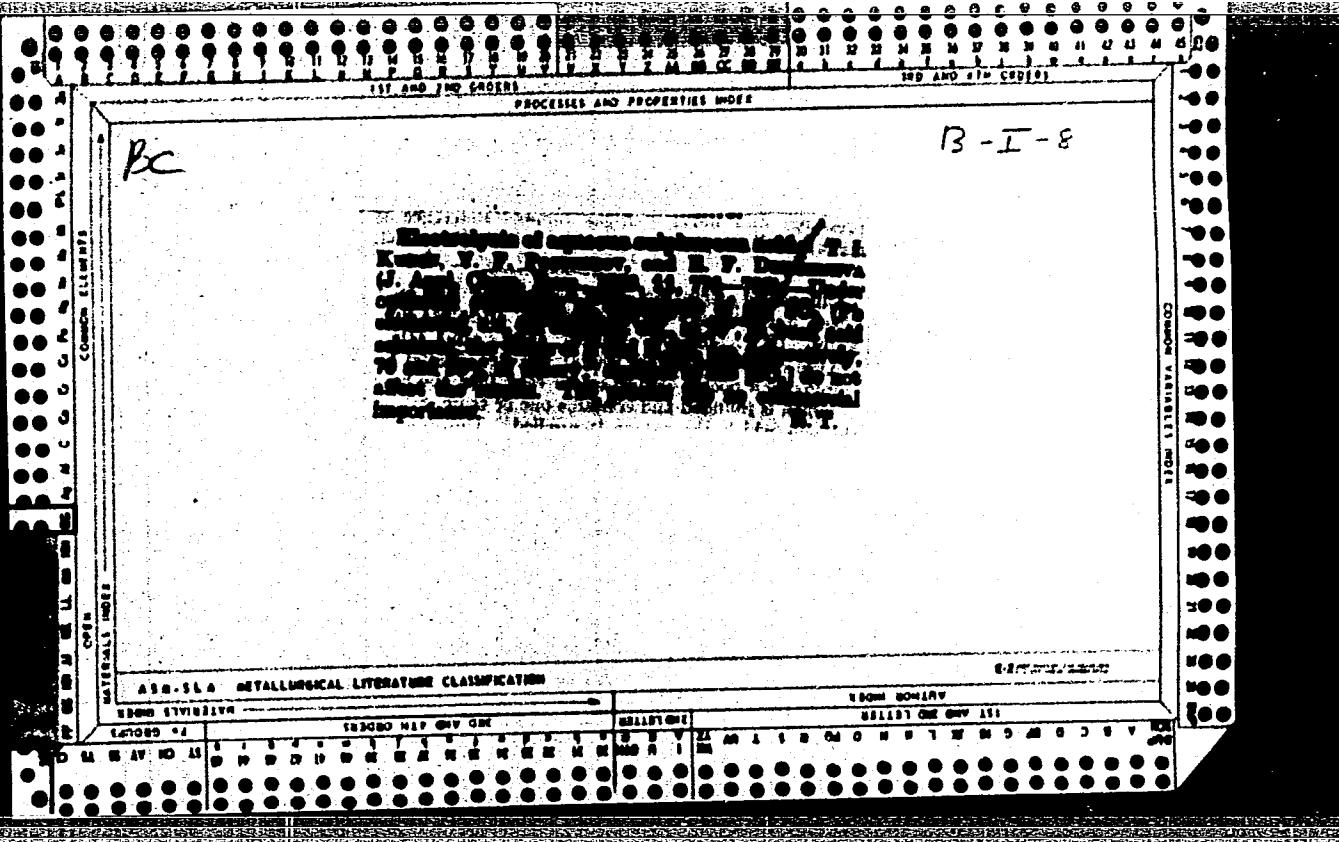






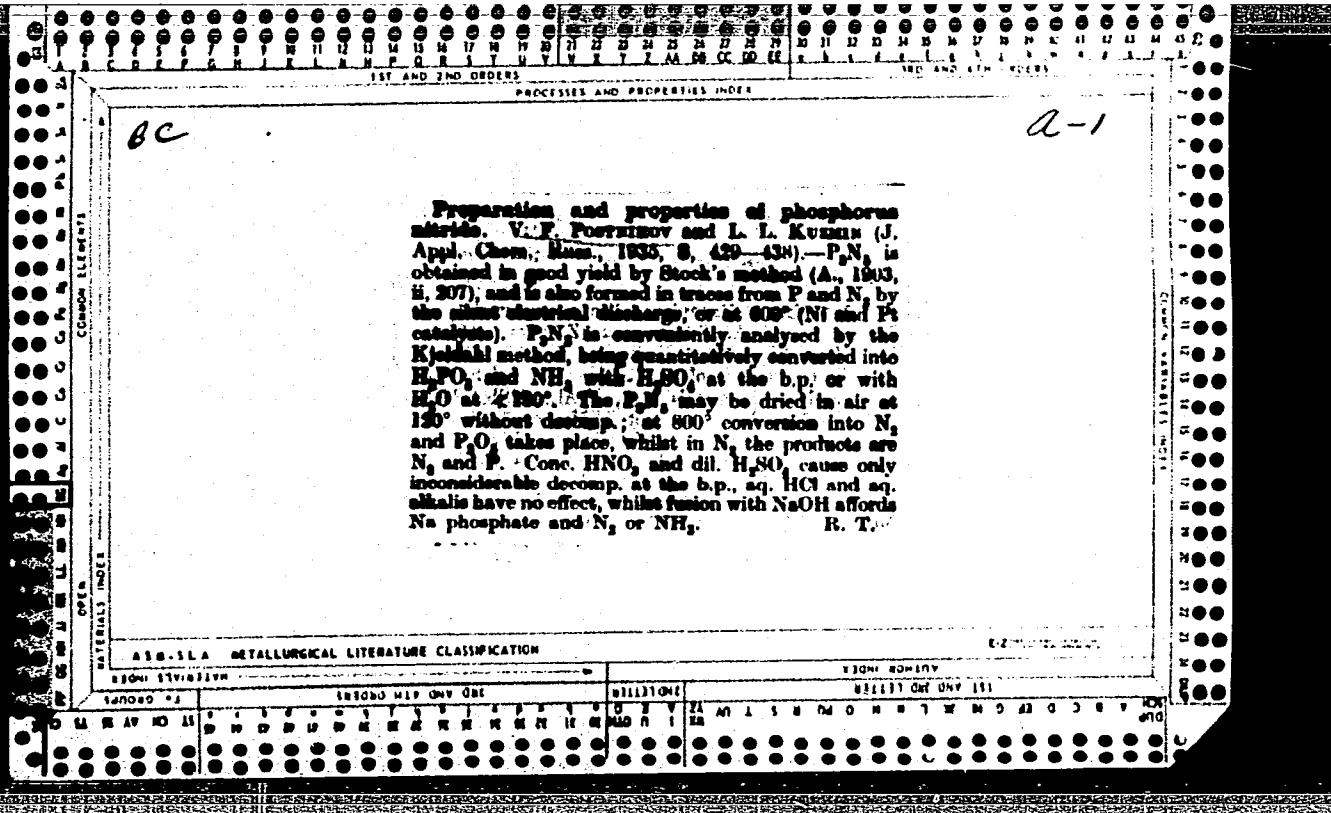
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L 25795-66 ACC NR: AM6008537	(A)	Monograph	UR/ 13 B+/-
Kirillov, Boris Nikolayevich (Colonel); Postnikov, Viktor Fedorovich (Colonel) Tank company in combat (Tankovaya rota v boyu) Moscow, Voyenizdat M-va obor. SSSR, 1965. 159 p. illus. 6000 copies printed.			
TOPIC TAGS: military operation, ground force tactic, military training, ground force training, tactics			
PURPOSE AND COVERAGE: This book is intended for officers of armored and motorized units, for officers in the reserves, and for students in military schools. It can also be used by students of tactics of armored units. The role, the position, and combat objectives of an armored company, as a part of modern general military forces, are considered here. Various operations of an armored company, before and during combat, are discussed and the company commander is advised on different types of combat actions. Actions of an armored commander during offensive and defensive attacks are shown in specific examples.			
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I. 25795-66

ACC NR: AM6008537

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 - Ch. 3. An armored company on the march -- 61
 - Ch. 4. An armored company on the offensive -- 76
 - Ch. 5. An armored company on the defensive -- 115
 - Ch. 6. Disposition of an armored company at rest and in outposts -- 141

SUB CODE: 15 / SUBM DATE: 15Jun65/

Card : 2/2 CC

KIRILLOV, Boris Nikolayevich, polkovnik; POSTNIKOV, Viktor Fedorovich, polkovnik; KONKIN, P.I., red.

[Tank company in battle] Tankovaia rota v boiu. Moskva, Voenizdat, 1965. 159 p. (MIRA 19:1)

POSTNIKOV, V.P. (Khar'kov, ul. Petrovskogo, d.36, kv.10)

Reaction of the sympathetic-adrenal system to surgical intervention for thyrotoxicosis. Klin.khir. no.11:52-58 N '62.
(MIRA 16:2)

I. Kafedra khirurgii (zav. - zasluzhennyj deyatel' nauki, prof.
G.M. Gurevich) Khar'kovskogo meditsinskogo stomatologicheskogo
instituta.
(THYROID GLAND—SURGERY) (ADRENAL GLANDS)
(NERVOUS SYSTEM, SYMPATHETIC)

POSTNIKOV, V. F.

"The Effect of Feeding on the Crop Structure and Grain Quality of Winter Rye using Various Types of Fallow." Cand Agr Sci, Moscow Agricultural Acad imeni Timiryazev, Moscow, 1954. (RZhBiol, No 7, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun55

POSTNIKOV, V. F., kandidat sel'skokhozyaystvennykh nauk.

Effect of varying ratios of nitrogen, phosphorus and potassium in fertilizers on the yield and quality of winter rye in the non-Chernozem zone. Zemledelie 5 no.3:87-89 Mr '57. (MLRA 10:3)
(Rye) (Fertilizers and manures)

PoSTINKOV, V.F.

USSR/Cultivated Plants - Grains

M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91626
Author : Postinkov, V.F.
Inst : Moscow Agricultural Academy im K.A. Timiryazev
Title : The Influence of Various Proportion of NPK in Plant Nutrient on the Yield and Quality of the Winter Rye Grain in Non-Blacksoil Strip.
Orig Pub : Zemledeliye, 1957, No 3, 87-89.
Abstract : At the Experiment Station of Field Cultivation of Moscow Agricultural Academy in 1948 - 1951, tests were conducted to study the effect of various proportions of NPK in fertilizers and their application schedule in side-dressing on the yield and quality of winter rye grain. Feeding rye with phosphorous - potassium fertilizers in fall has a positive effect on the plant growth and winter resistance.

Card 1/2

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POSTNIKOV, V.F. (Khar'kov, ul. Basseynaya, d.36, kv.10)

Recurrence of neurinoma of the posterior mediastinum. Nov.
khir.arkh. no.1:113-115 Ja-F '59. (MIRA 12:6)

1. Kafedra khirurgii (zav. - zasl.deyatel' nauki prof. G.M.
Gurevich) Khar'kovskogo meditsinskogo stomatologicheskogo
instituta na baze 17-y klinicheskoy bol'nitsy.
(MEDIASTINUM--TUMORS)

KARASEV, I.P.; ZOLOTOV, A.N.; POSTNIKOV, V.G.; FUKS, B.A.

Some problems in the field prospecting of fractured carbonate
reservoir rocks in the Markovo oil field. Trudy VNII no.43:
144-156 '65. (MIRA 18:6)

POSTNIKOV, V.G.; POSTNIKOVA, I.Ye.

Possibility of reef formation in the Lower Cambrian sediments of the
Markov prospecting area (Irkutsk Province). Dokl. AN SSSR 158 no.3
605-608 S '64. (MIRA 17:10)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR. Pred-
stavлено академиком А.А. Трофимуком.

POSTNIKOV, V.G.

Volumetric method for calculating oil reserves in fractured reservoir rocks. Trudy VIII no.14;165-177 '52. (MIRA 12:7)
(Oil fields--Valuation)

KOVALEV, A.G.; KOCHESHKOV, A.A.; POSTNIKOV, V.G.

Some problems concerning the present-day status of geology and
the development of fractured oil reservoir rocks (digest of
foreign literature). Trudy VNII no.42:362-376 '65.
(MIRA 18:5)

BYKOV, N.Ye.; POSTNIKOV, V.G.

Determining the producing characteristics of oil fields with
thinly layered reservoir rocks. Trudy VNII no.23:74-83 '60.
(MIRA 13:11)

(Krasnodar Territory--Petroleum geology)

Postnikov, V.A.

PAGE I BOOK INFORMATION

S(5) 5/1982

Vsesoyuzny nauchno-tekhnicheskiy gosogorodostroy na fizicheskoy initsiativ

Vnesichnyi nauchno-tekhnicheskiy gosogorodostroy na fizicheskoy initsiativ v Livan
v maye 1977 g. (Problems in Exploration and Production of Oil and Gas
in the Ukrainian SSR. Reports Presented at a Session of the Scientific Committee
of the All-Union Petroleum Scientific Research Institute for Geological
Survey and the All-Union Scientific Research Institute, 14 Nov., May 1977)
Moscow, Gosgeotehnizdat, 1979. 232 p. 1,000 copies printed.

Additional sponsor(s) Agency: USSR. Ministerstvo geologii i otryazhnoi nafty.

Maior, I. G., Barnova, V. V., Gushchik, and A. S. Miroshnichenko. Executive Eds.:
E. N. Tengnay, and A. I. Zaretskaya; Tech Ed.: I. O. Pidkova.

PURPOSE: This book is intended for petroleum geologists and Ukrainian area
specialists.

CONTENTS: This book contains 27 reports originally read at a meeting of the
scientific council of the VNIIG (All-Union Petroleum Scientific Research
Institute for Geological Survey), the VNR (All-Union Scientific Research
Institute for Petroleum Survey), the VNIIG (All-Union Scientific Research
Institute), the VNIIG (All-Union Scientific Research Institute for
Geological Survey), and the VNIIG (All-Union Scientific Research
Institute for Petroleum Survey). In May 1977, the
papers deal with the petroleum geology of the Dnieper-Dniester Depression, the
Dnieper, the Donets Basin, the northern part of the East European Platform,
Chernobyl, Chirchik-Pechora, the Donets Basin, the Black Sea, the Dnieper-Dniester Depression, the
Donets, the northern Black Sea area. Particular attention is given to describing
the geological features of those regions most likely to bear oil. Other
articles discuss oil production techniques and ways of increasing drilling
speed in deep wells. References are mentioned. References accompany
individual articles.

Zhdanovskiy, Yu. D.—Basic Geological Results of the Geophysical
Investigations Carried Out in 1976 in the Dnieper-Dniester Depression 165Shishlina, E. V.—The State of Oil Production in the Ukrainian Oil
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Editor and Analyst of the State of Exploration of the Dnieper
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POSTNIKOV, V.G.

POSTNIKOV, V.G.

Characteristics of modern oil and gas prospecting methods used in
foreign countries. Geol. nefti i no.8:62-71 Ag '57. (MIRA 10:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut.
(Petroleum geology) (Gas, Natural--Geology)

TOPCHIYEV, A.V., akademik, redaktor; TROFIMUK, A.A., redaktor; TREBIN, F.A., doktor tekhnicheskikh nauk; redaktor; FEDYNSKIY, V.V., doktor fiziko-matematicheskikh nauk, redaktor; SUKHOVA, V.P., inzhener, redaktor; POSTNIKOV, V.G., redaktor; VOL'FSOHN, S.I., redaktor; BEKHMAN, Yu.K., vedushchiy redaktor; KOVALEVA, A.A., vedushchiy redaktor; PERSHINA, Ye.G., vedushchiy redaktor; SAVINA, Z.A., vedushchiy redaktor; USOVA, N.G., vedushchiy redaktor; ZAMARAYEVA, K.M., vedushchiy redaktor; NOVIKOVA, M.M., vedushchiy redaktor; L'VOVA, L.A., vedushchiy redaktor; YERSHOV, P.R., vedushchiy redaktor; POLOSINA, A.S., tekhnicheskiy redaktor; TROFIMOV, A.V., tekhnicheskiy redaktor

[4th International Petroleum Congress] IV Mezhdunarodnyi neftianoi kongress. Moskva, Gos. nauchno-tekh. izd-vo neftianoi i gorno-toplivnoi lit-ry. Vol.1. [The geology of oil and gas deposits] Geologiya neftianykh i gazovykh mestorozhdenii. (Pod red. A.A.Trofimuka). 1956. 534 p. Vol.2. [Geophysical methods in prospecting] Geofizicheskie metody razvedki. (Pod red. V.V.Fedynskogo). 1956. 392 p. Vol.4. [The technology of oil and shale processing] Tekhnologiya pererabotki nefti i slantsev. 1956. 527 p. Vol.5. [Chemical processing of oil and gas] Khimicheskaya pererabotka nefti i gaza. 1956. 302 p. Vol.8. [Equipment, metals and protection from corrosion] Oborudovanie, metally i zashchita ot korrozii. 1956. 227 p. (MLRA 9:12)

1. International Petroleum Congress, 4th, Rome, 1955. 2. Chlen-korrespondent AN SSSR (for Trofimuk)
(Prospecting--Geophysical methods) (Petroleum--Refining)
(Gas, Natural)

MIKHEYEV, Grigoriy Fedorovich; POSTNIKOV, Vladimir Ivanovich;
VORONOVA, A.I., red.; VLASOVA, N.A., tekhn. red.

[Effectiveness of using radioisotopes in the national economy]
Effektivnost' primeneniia radioaktivnykh izotopov v narodnom
khoziaistve. Moskva, Gosatomizdat, 1962. 102 p. (MIRA 15:7)

1. Institut ekonomiki Akademii nauk SSSR i Kafedra organizatsii
proizvodstva Moskovskogo Vysshego tekhnicheskogo uchilishcha
im. Baumana (for Mikheyev, Postnikov).
(Radioisotopes—Industrial applications)

LETELENKO, V.A.; POSTNIKOV, V.I.; NADEINSKAYA, Ye.P., doktor tekhn.
nauk, retsenzent; SOROKIN, V.S., inzh.-ekon., retsenzent;
SHTAN', A.S., kand.khim.nauk, red.; SMIRNOVA, G.V., tekhn.red.

[Economic fundamentals of the use of radioisotopes in the
machinery industry] Ekonomicheskie osnovy primeneniia ra-
dioaktivnykh izotopov v mashinostroenii. Moskva, Mashgiz,
1963. 218 p. (MIRA 17:1)

L 17735-65 EWT(m) Feb DIAAP
ACCESSION NR AM5004502

BOOK EXPLOITATION

S/

S

B-T!

Postnikov, Vladimir Ivanovich; Razumov, Ippolit Mikhaylovich

Atomic energy in the national economy; economics and experience of application
(Atomnaya energiya v narodnom khozyaystve; ekonomika i opyt primeneniya),
Moscow, Izd-vo "Ekonomika", 1964, 174 p. illus., biblio. Errata slip
inserted. 4,500 copies printed.

TOPIC TAGS: atomic energy, economics, radioactive isotopes, nuclear power
engineering, radiation effect

PURPOSE AND COVERAGE: This book discusses the problems of the economic effectiveness of the use of atomic energy in domestic and foreign industry and presents data associated with expanded use of atomic energy. On the basis of a large amount of factual material, the book indicates the most economical ways of introducing the use of radioactive isotopes in the national economy. The book recommends safety measures and gives the details of the use of certain types of radioactive sources. The book is intended for engineers, technicians, economists, planners, teachers, and students of higher educational institutions and technicals and a large audience of readers interested in these problems.

Card 1/2

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TABLE OF CONTENTS [abridged] :

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Ch. III. Economic indicators of the use of atomic technology abroad — 78
Ch. IV. Some problems of unification in radionuclide instrument building — 126
Ch. V. Organization of safety measures in working with sources of ionizing radiation — 139

SUBMITTED: 30 Sep 64

SUB CODE: NP, IE

OTHER: 015

NO REF Sov: 100

Card 2/27B

L 1580-66 EWT(d)/EWT(m)/EWP(c)/EWP(v)/T/EWP(k)/EWP(h)/EWP(l)/ETC(m)

DIAAP WW
AM5020748

BOOK EXPLOITATION

UR/
539.163:004.15(018)

Postnikov, Vladimir Ivanovich

Methods for determining the effectiveness of using radioactive isotopes (Metodika opredeleniya effektivnosti primeneniya radioaktivnykh izotopov) Moscow, Atomizdat, 1964. 103 p. illus., biblio.

TOPIC TAGS: isotope, radioisotope, industrial nuclear application, nonmilitary nuclear application

PURPOSE AND COVERAGE: This book is intended for professional personnel in Soviet industry. Based on actual cases and using concrete examples, the book deals with the efficiency of radioisotope techniques, methods for calculating their efficiency, and facts regarding the use of radioactive isotopes and its effect on technical and economic factors. The book also shows that safety requirements do not affect the efficiency of using radioisotopes in industry. No personalities are mentioned.

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L 1580-66

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Ch. I. Technical and Economic Indicators Illustrating the Introduction of
New Techniques -- 5

Ch. II. Technical and Economic Basis for Using Radioactive Isotopes -- 26

Ch. III. Basic Effective Areas of Radioisotope Application -- 67

Bibliography -- 101

SUB CODE: GC, NP

SUBMITTED: 12Sep65

NO REF Sov: 021

OTHER: 601

dg
Card 2/2

POSTNIKOV, Vladimir Ivanovich; LESTENKO, Viktor Aleksandrovich; TATOCHENKO,
L.K., kand.tekhn.nauk, retsenzent; KALINOVA, R.S., retsenzent;
SEITAN', A.S., kand.khim.nauk, red.; SEMENOVA, M.M., red.izd-vs;
EL'KIND, V.D., tekhn.red.

[Efficiency of radiographic control in the manufacture of
machinery; applicable to gamma-ray flaw detection] Effektivnost'
radiosaktivnogo kontrolia v mashinostroenii; primenitel'no k gamma-
defektoskopii. Predsl. A.V.Topchieva. Moskva, Gos.nauchno-tekhn.
izd-vo mashinostroit.lit-ry, 1960. 143 p. (MIRA 14:4)
(Radioisotopes--Industrial applications)

POSTNIKOV, Vladimir Ivanovich; LETENKO, Viktor Aleksandrovich;
TATOCHENKO, L.K., kand.tekhn.nauk, retsenzent; KALINOVA,
R.S., retsenzent; SHTAH', A.S., kand.khim.nauk, red.;
SEMENOVA, M.M., red.izd-va; EL'KIND, V.D., tekhn.red.

[Efficiency of radioactive control in the machinery industry
applied to gamma-ray flaw detection] Effektivnost' radio-
aktivnogo kontrolia v mashinostroenii; primenitel'no k gamma-
defektoskopii. Predsl. A.V.Topchieva. Moskva, Gos.nauchno-
tekhn.izd-vo mashinostroit.lit-ry, 1960. 143 p. (MIRA 14:4)

(Radioisotopes--Industrial applications)

S/122/60/000/008/005/006
A161/A029

AUTHOR: Postnikov, V.I., Candidate of Technical Sciences
TITLE: Application of Radioactive Isotopes in Machine Building Industry
PERIODICAL: Vestnik mashinostroyeniya, 1960, No. 8, pp. 78-80

TEXT: Information is given on an all-Union conference on the application of radioactive isotopes and nuclear radiation in the USSR economy. The conference was convened in Riga in April 1960. Only the practical use of radioactive isotopes and nuclear radiation was discussed. Most of the 167 reports were read by delegates from industrial plants or research and other organizations together with industrial works. Institut ekonomiki AN SSSR (Institute of Economics AS USSR) reported on the nationwide economic effect of isotope application, and the Production Organization Department of MVTU im. Baumana (MVTU im. Bauman) on the effect in machine industry. The high economic effect was illustrated by data in many reports (the works "Russkiy Dizel'" ("Russian Diesel"), PTO im. Kirov and others). The major application in machine industry is to nondestructive inspection (gamma-defectoscopy), study of wear resistance of cutting tools and prime mover parts and automation problems. At the "Krasnyy kotel'shchik" works in

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Application of Radioactive Isotopes in Machine Building Industry

Taganrog the use of gamma-defectoscopy cut from 60 % down to 10 % the number of complaints about defects in welds; at the locomotive repair works in Dnepropetrovsk complaints went down to 2 % (from former 35 %), and at the Zavod svarynykh konstruktsiy im. Babushkina (Welding Structure Works im. Babushkin) to 10 % (from 50 %). At the Moscow Automobile Works im. Likhachev (or ZIL) the central plant laboratory group of isotopes and radiation makes up to 1,200 gamma-ray photographs monthly for 15 plant shops and is using cobalt 60 (with γ Π -Co-5 (GUP-Co-5))¹ and γ Π -Co-50 (GUP-Co-50)² apparatus, and transportable containers with cesium-137 and iridium-192. A filmless defectoscope is under development for inspection of castings on conveyers. The "Krasnyy kotel'shchik" Plant (Taganrog) uses different gamma-ray means since 1947 for welds on boilers. Annular seams on large vessels are inspected by an ampoule with gamma-ray source placed in the mid of the vessel, and sometimes 6-12 ampoules spaced 0.5 m apart are used simultaneously. The plant builds a new laboratory in which stronger radiation sources can be used. In a report "On the Results of the Application of thulium-170 for gamma-defectoscopy" information was given on application to inspection of thin-walled (up to 10 mm) steel work. Thulium-170 of 0.5 g-equ. Ra activity in combination with the new γ Π -Tu-0.5 (GUP-Tu-0.5) installation

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Application of Radioactive Isotopes in Machine Building Industry

raises the inspection rate by about 15 % (in combination with X-ray inspection). With a stronger activity the inspection rate can be doubled. Despite the high effect of application, practical use of gamma-defectoscopy is hampered by the low quality of films, insufficient assortment of apparatus and slow supply of radiation sources; automatic gamma-inspection is not possible. Wear inspection of machine parts and prime movers was treated in reports from ZIL: KHTZ (Khar'kov Traktor Works im. Ordzhonikidze); VTZ (Vladimir Traktor Works) NATI (Scientific Research Institute of the Automobile and Tractor Industry) and NAMI (Scientific Research Institute of Automechanics). High-speed test methods were developed for inspection of the wear-resistance of separate parts of the new D-30 (D-30) engine of VTZ works. Jointly with NATI a method had been developed for studying the wear of parts in operating tractors and the accumulation of the wear products in circulating lubricant in filters; radioactive cobalt-60 tracers were used and proved that the wear of piston rings was three times as high in cold weather than in warm. The wear resistance of the D-30 engine cylinder block group had been raised by 50 %; test time had been cut down to 4-5 hours (from former 500-1,00 hours). A road laboratory of NAMI tests the wear of auto-

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Application of Radiocative Isotopes in Machine Building Industry

mobile parts in different conditions in very short time. The wear of cutting tools is studied by activation of the specimens at Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut VNII (All-Union Scientific-Research Institute of Instruments) and at the ZIL. Until now the metallurgical works used chemical laboratory tests for determining the thickness of tin coatings (dissolving the coating in acid) taking 30 minutes during which the shop continued work (probably producing waste), but now the isotope apparatus inspects the coating thickness in a few minutes and on both sides of the metal, and the process can be automated. The report of a delegate from Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (Ukrainian Scientific Research Institute for Pipes) dealt with the application of isotopes to the study of production processes. Sulfur-35 and phosphorus-32 were used for studying the crystalline structure of centrifugally cast tubular billets and the sulfur distribution. The effect of hot rolling on the redistribution of sulfur and phosphorus in ready tubes was also studied, as well as in welds after automatic arc welding with two arcs under flux. It was stated that hot rolling causes sulfur redistribution on grain boundaries only, and more even than in cast steel; in weld metal

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A161/A029

Application of Radioactive Isotopes in Machine Building Industry

the sulfur content grows mainly on account of the parent metal. ZIL and Moskovskiy stankoinstrumental'nyy institut (Moscow Institute of Machine Tools and Tools) in cooperation with Institut fiziki Latviyskoy SSR (Institute of Physics of the Latvian SSR) reported on automatic fluid level control for soaking the windings of electric motors and transformers at the ZIL works; automatic survey of operating stamping presses, etc. For instance, strontium-90 + yttrium-90 is used in an experiment unit for blocking separate machine units in automatic cold sheet stamping lines at the ZIL. The work of organizations supplying the equipment and materials was criticized in the conference resolution.

Card 5/5

POSTNIKOV, Vladimir Ivanovich; AVAKIMOV, G.G., red.

[Methodology of determining the efficiency of the use of
radioisotopes] Metodika opredeleniya effektivnosti pri-
meneniia radioaktivnykh izotopov. Moskva, Atomizdat,
1964. 103 p. (MIRA 17:11)

POSTNIKOV, Vladimir Ivanovich; RAZUMOV, Ipplit Mikhaylovich;
ZAV'YALOVA, A.N., red.

[Atomic energy in the national economy; its economics and
use] Atomnaya energiya v narodnom khoziaistve; ekonomika
i opyt primeneniya. Moskva, Ekonomika, 1964. 174 p.
(MIRA 17:11)

PHASE I BOOK EXPLOITATION

SOV/5260

Postnikov, Vladimir Ivanovich, and Viktor Aleksandrovich Letenko

Effektivnost' radioaktivnogo kontrolya v mashinostroyenii; primenitel'no k
gamma-defektoskopii (Effectiveness of Radioactive Control in Machine
Building; Gamma-Defectoscopy) Moscow, Mashgiz, 1960. 143 p. Errata
slip inserted. 4,000 copies printed.

Ed. (Title page): A.V. Topchiyev, Academician; Reviewers: L.K. Tatochenko,
Candidate of Technical Sciences, and R.S. Kalinova; Ed.: A.S. Shtan',
Candidate of Chemical Sciences; Ed. of Publishing House: M.M. Semenova;
Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on the Economics and
Organization of Machine Building: T.D. Saksaganskiy, Engineer.

PURPOSE: This book is intended for specialists in industrial quality control.
It will also be of interest to economists and technical personnel in machine-
building factories and research institutes.

Card 1/6

2. X-ray defectoscopy

14

14

18

Card 2/6

POSTNIKOV, V. I., Cand Tech Sci -- "Technical and economic substantiation of
the selection of radioactive isotopes in ^{gamma-ray} ~~gamma-ray~~ ^{radiotherapy} radiobiology." Mos, 1959
(Min of Higher Education USSR. Mos Order of Lenin and Order of Labor Red
Banner Higher Tech School im Bauman). (KL, 1-61, 196)

-232-

25(6)

SOV/32-25-7-43/50

AUTHOR:

Postnikov, V. I.

TITLE:

Computation Method for the Determination of Expenses in Connection With Irradiation by Means of Radioactive Isotopes and Accelerators (Raschetnyy metod opredeleniya zatrata pri prosvetivivaniis pomoshch'yu radioaktivnykh izotopov i uskoriteley)

PERIODICAL:

Zavodskaya laboratoriya, 1959, Vol 25, Nr 7, pp 888-890 (USSR)

ABSTRACT:

The present paper is a review of the topic mentioned in the title. In connection with the expansion of the use of the gamma-material testing it is advisable to establish the maximum sensitivity and minimum exposition time for certain tests. The

use of Co⁶⁰ is most favorable if samples of a thickness of 50-250 mm are irradiated; in the case of a thickness up to 50 mm (as is the case e.g. at the "Russkiy dizel'" factory, etc) the sensitivity of the method decreases and the expenses for protection from radiation increase. The gamma-rays of Cs¹³⁷

are to be used with objects of a thickness of 10-100 mm; nevertheless, Cs¹³⁷ is used for examinations of a thickness of 5-6 mm (e.g. at the Rizhskiy sudoremontnyy zavod (Riga Shipyard)).

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SOV/32-25-7-43/50

Computation Method for the Determination of Expenses in Connection With Irradiation by Means of Radioactive Isotopes and Accelerators

The isotope Eu^{152,154} was not used very much because of its high price. Ir¹⁹² has a short half-life and is used for a thickness of 2.5-100 mm. In the present paper the samples to be controlled are divided into 6 groups (with respect to their thickness) (Table 1). Since the exposition time is an important factor in the calculation of the expenses in connection with the tests to be discussed it is calculated according to an equation and given for several radiation sources (Table 2). A computation of the annual expenses is given on account of the half-life of several radiation sources (Table 3). For computing the main expenses an equation (2) is given and the expenses for the irradiation of various isotopes is calculated (Table 4). On account of the results obtained indications are given as to the use of various isotopes in material testing in regard to the least expenses. There are 4 tables and 4 references, 3 of which are Soviet.

Card 2/2

POSTNIKOV, V.I.

Calculation of expenses of examination with the aid of radioactive isotopes and accelerators. Zav.lab. 25 no.7:888-890
(MIRA 12:10)
'59. (Radioisotopes--Industrial applications)

LETENKO, V.A., kand.tekhn.nauk; POSTNIKOV, V.I., inzh.

Economical efficiency of using radioisotopes in machine building
and metal cutting. Mashinostroyitel' no.10:36-40 O '58.

(MIRA 11:10)

(Radioisotopes--Industrial applications)

SOV-117-58-10-25/35

AUTHORS: Letenko, V.A., Candidate of Economical Sciences; Postnikov,
V.I., Engineer

TITLE: Problems of the Economical Effectiveness of the Use of
Radioactive Isotopes in Machine Construction and Machin-
ing of Metal (Voprosy ekonomicheskoy effektivnosti pri-
meneniya radioaktivnykh izotopov v mashinostroyenii i
metalloobrabotke)

PERIODICAL: Mashinostroitel', 1958, Nr 10, pp 36 - 40 (USSR)

ABSTRACT: The authors comment on articles published in Soviet econo-
mical papers concerning the economical effectiveness of
the use of radioactive isotopes in machine construction
and machining of metal. They also point to similar inve-
stigations and results in the US presented by doctor V.F.
Libby (Libbi) and M.E. Merchant (Merchant). Less concerned
with theoretical deliberations and economical indices the
authors base their preliminary conclusion on the high eco-
nomy already obtained by the introduction of radioactive
isotopes in these fields and the still greater savings ex-
pected in the near future on factual material gathered
from Soviet plants and enterprises. They investigate pro-
blems in the use of radioactive isotopes in the contact-

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SOV-117-58-10-25/35

Problems of the Economical Effectiveness of the Use of Radioactive Isotopes in Machine Construction and Machining of Metal

less thickness control of rollable sheet metal, in the contactless thickness control of metal plating by the method of reflection of radioactive radiation and in the utilization of marking and determination of optimal cutting conditions by aid of the marked atoms method. Inquiries of the Tsentral'naya laboratoriya avtomatiki tresta "Energochermet" (Central Laboratory of Automation of the "Energochermet" Trust), the manufacturer of devices utilizing radioactive isotopes for the control of the thickness of rollable sheet metal and the thickness of tin plating of tin plate, revealed that the following plants had made great savings both of material and money by the application of radioactive isotopes: the Magnitogorskiy metallurgical kombinat (Magnitogorsk Metallurgical Combine), Zavod "Zaporozhstal'" imeni S. Ordzhonikidze (The "Zaporozhstal'" Plant imeni S. Ordzhonikidze), the Leningradskiy staleprokatnyy i provolochno-kanatnyy zavod (Leningrad Steel Rolling and Wire and Rope Plant) and Lys'venskiy metallurgicheskiy zavod (The Lys'va Metallurgical Plant). The Central Laboratory of Automation of the "Energochermet" Trust and Fizicheskiy institut imeni P.N. Lebedeva AN SSSR (The AS USSR's Physical Institute imeni P.N. Lebedev) have

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developed an apparatus for the thickness control of rollable steel strip of 0.005 to 1 mm thickness at a possible rolling speed of up to 30 m per second. Since 1953, the following metallurgical and steel-rolling plants have used to advantage convenient apparatus of this kind: the Magnitogorsk Metallurgical Combine, the "Zaporozhstal'" Plant, the Leningrad Steel-rolling and Wire and Rope Plant, Leningradskiy zavod imeni Voroshilova (The Leningrad Plant imeni Voroshilov), Moskovskiy metallurgicheskiy zavod (The Moscow Metallurgical Plant), etc. These devices comprise 3 groups, depending on the thickness to be measured: 1) for 0.005 to 0.15 mm, using the radioactive isotope thallium 204; 2) 0.05 to 1.0 mm, using the isotopes of cerium 144, praseodymium 144 and, at present, mainly strontium 90; 3) 2.0 to 10 mm, using the radioactive isotopes iridium 192 and wolfram 185. Chemical analyses of the ekspress-laboratoriya MMK (Express Laboratory MMK) confirmed the positive results of the plants. The Institut fiziki AN Latviyskoy SSR (Physical Institute, AS Latvian SSR) and Leningradskiy staleprokatnyy zavod (The Leningrad Steel-Rolling Mill) cooperated in the first utilization of the

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radioactive isotope phosphorus 32 for the control of sorting cold-rolled steel strip in processing operations. For marking purposes, a radioactive isotope is applied on the steel band by aid of a special electrode containing phosphorus 32 in its compound. The isotope emits beta rays and has a half-decay period of 14.3 days. This method reduced the number of necessary chemical analyses from 8,635 to 3,369 a month. Radioactive isotope marking is also used in the same plant for the control of the welding seams (per coil) of wire passed through the wire-drawing mills. Basic study of the wear of cutting tools is underway at the Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut (All-Union Scientific Research Tool Institute), the Institut mashinovedeniya AN SSSR (AS USSR Institute of Mechanical Engineering), the Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant imeni Likhachev), the kombinat tverdykh splavov (Hard Alloys Combine).

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SCV-117-58-10-25/35

Problems of the Economical Effectiveness of the Use of Radioactive Isotopes in Machine Construction and Machining of Metal

and several other organizations. In connection with this research, the isotopes of cobalt 60, wolfram 185, wolfram 187 and others are "inserted". Results are entered on a graph, comparing the speed and cost of the investigation. Large savings were obtained. Reports from plants and research institutes on the use of radioactivated isotopes presented favorable balances.

1. Machines--Production 2. Radioisotopes--Applications

Card 5/5

1.8000
18.8400

32796
S/137/61/000/012/107/149
A006/A101

AUTHOR: Postnikov, V. I.

TITLE: Selection of economically effective gamma emitters for flaw detection

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1961, 66, abstract 12E408 (V sb. "Radioakt. izotopy i yadern. izlucheniya v nar kh-ve SSSR, v. 3", Moscow, Gostoptekhizdat, 1961, 57-61)

TEXT: A study was made for the purpose of establishing the limits of the most efficient use of gamma-emitters, and of developing optimum limits of applying and selecting gamma-emitters on the basis of technical and economical indices. Nomograms are plotted which can be used to select both the source and its operational conditions, in order to assure highest inspection efficiency at minimum expense. The author established gammagraph expenses as a function of such factors as the thickness of metal to be inspected, type and intensity of the source, and gamma-raying conditions connected directly with industrial conditions. Comparison graphs make it possible to draw particular conclusions as to the limits of the most effective use of the analyzed sources. For up to

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32796

S/137/61/000/012/107/149

A006/A101

Selection of economically effective gamma ...

100 mm thick metal, independent of the source intensity, Ir, Cs and Eu are preferable to Co, in respect to efficiency, transportation time, and expenses for the gammagraph. The application limit may be 60 mm for iridium, 100 mm and more for Cs and Eu. It is not recommended to use Tu on a thickness of over 10 - 15 mm. Co should be employed for > 80 mm thick metals. Data are also presented on the use of gamma-flaw-detection at industrial enterprises and the economical effect obtained.

V. Tarisova

[Abstracter's note: Complete translation]

Card 2/2

BEZZUBOV, Aleksey Dmitriyevich; POSTNIKOV, Vladimir Ivanovich; FAYNBOYM,
I.B., red.; ATROSHCHENKO, L.Ye., tekhn.red.

[Radioisotopes in the food industry] Radioaktivnye izotopy v
pishchevoi promyshlennosti. Moskva, Izd-vo "Znanie," 1958.
30 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh
i nauchnykh znanii. Ser. 8, vyp. 2, no.26) (MIRA 12:2)
(Food industry) (Radioisotopes--Industrial applications)